

CLiQ



CLiQSPERSE®

CLiQFLOW®

CLiQSMART®

**Product Overview
Additives - 2019**



CLIQSPERSE® wetting and dispersing agents for non-aqueous systems

CLIQSPERSE®	Product Chemistry	Active Content	Solvents / Diluents
BA	polymeric resin-like	73 %	white spirit
BF	high molecular weight dispersant	45 %	xylene / MPA
BL	high molecular weight dispersant	43 %	MPA / butyl acetate
BG	high molecular weight dispersant	45 %	MPA / butyl acetate / sec. butanol
BT	high molecular weight dispersant	53 %	xylene / MPA
CA	salt of polycarbonic acid with polyamine	53 %	xylene / isobutanol
CA-100	salt of polycarbonic acid with polyamine	100 %	none
HA-50	phosphate ester copolymer	55 %	aromatic hydrocarbon / MPA
HA	phosphate ester copolymer	100 %	none
HK	neutralised phosphate ester	100 %	none
131	acidic co-polymer	100 %	none
PH-2	polymeric alkylammonium salt	100%	none



Function			Main Application			Special Feature	CLIQSPERSE®
Compatibility agent	Wetting agent	Dispersing agent	Coatings / Paints	Pigment concentrates	Base paints		
	+	+++	+++	++	+	multi-purpose grinding resin	BA
	+	+++	++	+++	++	broad pigment compatibility excellent for resin based pigment concentrates	BF
	+	+++	++	+++	+++	aromatic-free dispersant with broad pigment - and binder compatibility	BL
	++	+++		+++		aromatic-free, excellent for high value carbon blacks	BG
	+	++	++	+++		excellent for direct grinding of pigments and extenders	BT
	+++	+	++	+	+++	organoclay activator	CA
	+++	+	++	+	+++	for solvent-free and high solids systems	CA-100
		+++	++	+	++	excellent for direct grinding of inorganic pigments and extenders	HA-50
		+++	++	+	++	excellent for inorganic pigments and extenders; for solvent-free applications	HA
++	++	+++	+++		++	excellent for direct grinding of pigments and extenders in all kind of non-aqueous systems	HK
+		+++	+++		++	for inorganic pigments and extenders; particularly recommended for 100% systems	131
	++	+++		+++		solvent-free and high solids coatings, adhesives, liquid masterbatches; excellent for carbon blacks	PH-2



CLiQFLOW® rheological additives for non-aqueous systems

CLiQFLOW®		Product Chemistry	Active Content	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
	MMC	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
	780	urea urethane	40 % liquid	stirring / mixing

CLiQSMART® defoamer for non-aqueous systems

CLiQSMART®		Product Chemistry / Active Content	VOC-free	Incorporation Requirements
	AF	polysiloxane, 100 %	no	low shear
	AP	polymeric, 100%	no	low shear
	PD-20	polysiloxane modified polymeric, 100%	no	low shear



Performance Benefits	Main Application	CLiQFLOW®
provides storage stability, 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 concentrations	MMC
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
strong thixotropic flow for storage stability and sag resistance	solvent-free, aliphatic to high polar systems; industrial coatings, marine/protective	780

Application Field					Main Application / Remarks	CLiQSMART®
Clear systems	Pigmented systems	Gloss systems	Silk gloss systems	Matt systems		
+	+++	++	++	+++	multi-purpose defoamer for industrial non-aqueous coatings	AF
	+++	+	++	+++	polysiloxane free multi-purpose defoamer for industrial coatings	AP
	+++		+	+++	excellent defoamer for high build epoxy systems	PD-20



CLIQSPERSE® wetting and dispersing agents for aqueous systems

CLIQSPERSE®	Product Chemistry	Active Content	Solvents / Diluents
123	polyglycoether	100 %	none, VOC-free
124	polyglycoether	90 %	water, VOC-free
125	polyglycoether	100 %	none, VOC-free
126	polyglycoether	100 %	none, VOC-free
127	modified polyglycoether	100 %	none, VOC-free
128 130	polymeric carboxylate	25 % 20 %	water water, VOC-free
132	fatty acid modified polyester	100 %	none, VOC-free
133	fatty acid modified polyester	100 %	none, VOC-free
135	neutralised phosphate ester	100 %	none, VOC-free
140	polyglycoether	100 %	none, VOC-free
150	polymeric dispersant	40 %	water, VOC-free
151	polymeric dispersant	40 %	water, VOC-free
152	polymeric / surfactant blend	38 %	water
162	anionic surfactant	60 %	propylene glycol
172 175	sodium polycarboxylate ammonium polycarboxylate	45 % 30 %	water, VOC-free
180	polymeric dispersant	35 %	water
181	polymeric dispersant	27 %	water

VOC-free according to 2004/42/EC; * = < 1 g/l VOC according to 2004/42/EC



Function			Main Application			Special Feature	CLIQSPERSE®	
Compatibility agent	Wetting agent	Dispersing agent	Coatings / Paints	Pigment concentrates	Base paints			
+	+++	+	+	+++	+	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	127	
	+	+++	+++	+++	++	excellent resin compatibility, general industrial coating	128 130	
+	++	+++		+++	+	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	
	+++		++	+++		excellent wetting agent for effect pigments and high gloss industrial/decorative coatings	140	
		+++	++	+++	+++	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	
+++	+++			++	+++	highly efficient compatibilizer specifically for non-aqueous alkyd paints	162	
		++	+++		++	highly efficient for inorganic pigments and fillers; odourless (172)	172 175	
+	+++	+++	+++	+++	+++	for all pigments; excellent for high performing wood and industrial coatings/pigment concentrates	180	
	++	+++	+++	+	++	for inorganic pigments and extender; excellent for high performing wood primer and top-coats	181	





CLiQFLOW® rheological additives for aqueous systems

CLiQFLOW®	Product Chemistry	Active Content	VOC-free
600	highly beneficiated and activated smectite clay	100 % powder	yes
601	beneficiated and activated smectite clay	100 % powder	yes
615	highly activated smectite clay	100 % powder	yes
602	organically modified smectite clay	100 % powder	yes
603	organically modified smectite clay	100 % powder	yes
535	hydrophobically modified alkali swellable emulsion	30 % liquid	yes
540	acrylic inverse emulsion thickener	40 % liquid	no
781	urea urethane	40 % liquid	no
645 VR	non-ionic polyurethane associative thickener	25 % liquid	yes*
660 660 VR	non-ionic polyurethane associative thickener	25 % liquid	no yes*
660 VF	non-ionic polyurethane associative thickener	20 % liquid	yes
661 VR	non-ionic polyurethane associative thickener	40% liquid	yes*
675 675 VR	non-ionic polyurethane associative thickener	25 % liquid	no yes*
680	non-ionic polyurethane associative thickener	20 % liquid	yes
690	non-ionic polyurethane associative thickener	20 % liquid	yes
681	non-ionic polyurethane associative thickener	40 % liquid	yes



Viscosity Development			Special Features	CLiQFLOW®
Low Shear	Mid Shear	High Shear		
+++	+	o	for high value emulsion paints, industrial coatings and emulsion based construction systems	600
++	+	o	mineral based construction systems, high pvc emulsion paints	601
+++	+	o	high value decorative and industrial systems; provides a clear gel, excellent for clear coat	615
+++	++	o	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
++	++	+	provides a balanced sag and levelling performance with good storage stability; reduces spattering during roller application	535
++	+	o	provides strongly shear thinning flow behaviour; does not require neutralisation and can be added at any production step	540
+++	+	o	provides structure and storage stability with a strongly thixotropic flow; excellent for industrial spray applied and dip coatings	781
+++	+	o	extremely high low shear viscosity; excellent for spray applied and dip coatings	645 VR
++	++	+	low and mid-shear thickener for decorative and industrial systems	660 660 VR
++	++	+	low and mid-shear thickener for decorative and industrial systems	660 VF
++	++	+	excellent for pigment concentrates and industrial coatings	661 VR
+	+++	++	balanced thickener for decorative and industrial coatings	675 675 VR
o	+	+++	Newtonian flow, to improve brush drag and to reduce and to reduce spattering during roller application	680
o	+	+++	highly efficient Newtonian thickener; improves brush drag and to reduce spattering during roller application	690
o	++	++	excellent for pigment concentrates and industrial coatings; particularly recommended for blade, roller and brush applied	681





CLiQSMART® defoamer for aqueous systems

CLiQSMART®		Product Chemistry / Active Content	VOC-free	Incorporation Requirements
	111	polymeric, mineral oil-free and silicone-free, 100 %	yes	medium shear
	1014	mineral oil, silica and surface active materials, 100 %	no	low shear
	1015	mineral oil emulsion with silica and surfactants, 60%	no	low shear
	1031	polyglycol, 100 %	yes	medium shear
	1032	polyglycol emulsion, 49 %	yes*	low shear
	1051	polysiloxane emulsion, 20 %	no	low shear
	1052	polysiloxane emulsion, 11 %	no	medium shear
	1061	modified polysiloxane, 100%	no	high shear
	1062	modified polysiloxane emulsion, 24 %	no	medium shear

CLiQSMART® special additives for aqueous systems

CLiQSMART®		Product Chemistry	Active Content	Activation Requirements
	129	urethane based humectant; VOC-free	75 % liquid	low shear
	129-30	modified urethane based humectant; VOC-free*	90 % liquid	low shear
	HM-1	modified polymeric based humectant; VOC-free*	100 % liquid	low shear
	FS-1	formaldehyde scavenger, VOC-free*	90 % liquid	low shear
	N-1	amine based neutraliser	50 % liquid	low shear
	HV-30	MEKO-free anti-skinning agent	30 % liquid	low shear

VOC-free according to 2004/42/EC; * = < 1 g/l VOC according to 2004/42/EC



Application Field					Main Application / Remarks	CLiQSMART®	
Clear systems	Pigmented systems	Gloss systems	Silk gloss systems	Matt systems			
	+++		++	+++	emulsion paints, plasters and adhesives	111	
	++	++	+++	++	emulsion paints, plasters and adhesives, easy to emulsify	1014	
+	+++		++	+++	economical grade for emulsion paints	1015	
	+++		+++	++	mineral oil- and silicone-free for mid-to-high pvc emulsion paints, adhesives and inks	1031	
+	++	+	+++	++	emulsion paints and adhesives	1032	
++	+++	++	+++		gloss clear and pigmented systems	1051	
	+++	+	++	+++	economic grade for pigmented low-to-gloss systems	1052	
+	+++	+	+	+++	excellent for industrial coatings, requires high shear incorporation	1061	
++	++	++	++	++	excellent for industrial coatings, easier to emulsify than CLiQSMART 1061	1062	

Application Field	Main Application / Remarks	CLiQSMART®	
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 systems; provides wetting properties	HM-1	
significantly reduces formaldehyde emission from substrates and actively purifies indoor air	industrial and decorative waterborne paints and coatings, particularly wall-paints	FS-1	
wetting agent for inorganic pigments and fillers, neutralising agent	industrial and decorative coatings, extender slurries and inorganic concentrates to improve stability	N-1	
prevents skin formation in drying alkyd system	decorative and light industrial alkyds; MEKO alternative	HV-30	



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