



Product Guide L-G 6

Additives for Aqueous Coatings

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Our complete range of additives for coatings can be found in the Product Guide L-G 1.

Wetting and Dispersing Additives

Wetting and Dispersing Additives to Wet and Stabilize Pigments and Prevent Flooding/Floating

	Grinding		Pigments		Binder systems									
	With resin	Resin-free	Inorganic, fillers	Organic, carbon black	Emulsion paints		Emulsions			Hybridsystems	Water-soluble	Baking systems	2-pack PU	2-pack epoxy
					High PVC 35-80 (flat)	Low PVC 16-35 (glossy)	Acrylate	PUR	Alkyd					
ANTI-TERRA-250	■	■	■		■	□	□		□		■	■	□	■
BYK-154		■	■		■	□								
DISPERBYK-180	■		■				□	□		■	■	■		
DISPERBYK-184	■		■	■						■	■	□	□	
DISPERBYK-187*	■				■	■	■	■	■		□			
DISPERBYK-190		■	■	■		□	□	■	■	■	□	■	□	
DISPERBYK-191	■	■	■	■		□	■	□	■				□	
DISPERBYK-192		■	■**			□	■	■		■	□	■	■	
DISPERBYK-194 N		■	■	■				□				□	■	■
DISPERBYK-199	■	■	■	■	□	■	■	□		□				□
DISPERBYK-2010		■	■	■			■	■	□	□		■	■	
DISPERBYK-2012	■	■	■	■		□	■	■	■	■	■	■	□	□
DISPERBYK-2013***		■	□	■						■	□	■	■	
DISPERBYK-2015		■	■	■		□	□	■	■	■	□	■	□	
DISPERBYK-2055	□	■	■	■			■	■	□	■	■	■	■	□
DISPERBYK-2060		■	■	□	Universal pigment pastes for architectural coatings, POS									
DISPERBYK-2061		■		■	Universal pigment pastes for architectural coatings, POS									

■ especially recommended □ recommended

* to improve colorant acceptance

** effect pigments (aluminum, pearlescent)

*** especially for UV systems

Nano Additives for Improved Scratch Resistance

	Composition	Particle content (%)	Carrier	Particle size D50 (nm)	Recommended for
NANOBYK-3600*	Aluminum oxide nanoparticles	50	Water	40	Parquet and furniture coatings
NANOBYK-3603	Aluminum oxide nanoparticles	40	Water	25	Wood and furniture coatings, industrial, architectural coatings
NANOBYK-3620	Silica nanoparticles, surface-modified	30	Water	< 100	Wood and furniture coatings, industrial, architectural coatings

Carbon Nanotubes (CNT)

Dispersion of Multi-walled Carbon Nanotubes

	Carrier	Non-volatile matter (%)	Particle content (%)	Properties	Recommended for
CARBOBYK-9810	Water	21	8	Improves electrical and thermal conductivity, antistatic and mechanical properties, electromagnetic shielding	Coatings, printing inks, adhesives, plastics

Defoamers

Silicone Defoamers

	APEO-free	Usage in		Recommended for		
		Millbase	Letdown	Clears	Gloss and semigloss	Flats
BYK-017	yes	■			■	□
BYK-018	yes	■			■	□
BYK-019	yes	■			■	□
BYK-021	yes	■			■	□
BYK-022	yes	■	□		■	■
BYK-023	yes	■	□		■	■
BYK-024	yes	□	■	■	■	■
BYK-025	yes		■	■	■	□
BYK-028	yes	□	■	■	■	□
BYK-044	yes	■		Pigment concentrates		
BYK-081	yes	■	■	■	■	■
BYK-093	yes	■	■	■	■	■
BYK-094	yes	■	■	■	■	□
BYK-1610	yes	□	■		■	■
BYK-1615	yes	□	■		■	■
BYK-1650	yes	□	■		■	■
BYK-1719	yes	■		■	□	
BYK-1770	yes	■	□	■	■	■
BYK-1780	yes	■	■	■	■	□
BYK-1785	yes	□	■	■	■	□
BYK-1798	yes		□		■	

■ especially recommended □ recommended

Polymer Defoamers, Silicone-free

	APEO-free	Usage in		Recommended for			
		Millbase	Letdown	Clears	Gloss and semigloss	Flats	
BYK-011	yes	■	■	■	■	■	
BYK-012	yes	■	□		□	■	Emulsion paints and plasters
BYK-014	yes	■	□		□	■	Emulsion paints and plasters
BYK-015	yes	■	□	□			
BYK-016	yes	■	■	■	■	■	
BYK-1640	yes	■	■		■	■	Emulsion paints and plasters
BYK-1710	yes	■	■	□	□	■	
BYK-1711	yes	■			■		
BYK-1740	yes	■	□		■	■	Emulsion paints and plasters

■ especially recommended □ recommended

Mineral-oil Defoamers, APEO-free

	Contains silicone	Recommended for emulsion paints and plasters	
		Gloss and semigloss	Flats
BYK-035	-	■	□
BYK-037	-	□	■
BYK-038	-	■	■
BYK-039	yes	■	■

■ especially recommended □ recommended

Rheology Additives

Non-volatile matter (%)	Supply form/ Solvent	Incorporation			Viscosity increase at			Resulting flow behavior		Properties / Application areas
		Post-addition	With high shear	Premix in water	Low shear rates	Medium shear rates (KU)	High shear rates (CI)	Pseudo-plastic	Thixotropic	

Modified Ureas

BYK-420	52	N-Methylpyrrolidone								Anti-settling, anti-sagging, elasticity, universal use
BYK-7420 ES	40	Amide ester	■	□		■				
BYK-D 420	45	Dimethylsulfoxide								

Polyurethane Thickeners/Associative-thickeners

BYK-425	50	Polypropylene glycol 600	■			■	□		■	VOC-free associative thickener (urea-modified polyurethane); viscosity increase already at low dosage; very universal use
OPTIFLO-H 370 VF	17,5	Water	■			□	■		■	VOC-free associative thickener (HEAT), universal use
OPTIFLO-H 600 VF	15	Water	■			■			■	VOC-free associative thickener (HEAT), universal use
OPTIFLO-H 3300 VF	17,5	Water	■			□	■		■	VOC-free associative thickener (HEUR), very universal use
OPTIFLO-H 6500 VF*	20	Water	■			■	□		■	VOC-free associative thickener (HEUR), broad application in emulsion paints
OPTIFLO-H 7500 VF*	17,5	Water	■			■			■	VOC-free associative thickener (HEUR), especially for architectural paints and wood stains
OPTIFLO-L 100	20	Water	■					■	■	Associative thickener (HEAT), especially for acrylate and styrene/acrylate emulsions, excellent anti-syneresis
OPTIFLO-L 1400	20	Water	■					■	■	Associative thickener (HEUR), especially for acrylate and styrene/acrylate emulsions, very hydrophobic
OPTIFLO-M 2600 VF	20	Water	■				■		■	VOC-free associative thickener (HEUR), especially for colloidal emulsions (VAE)
OPTIFLO-T 1000**	22,5	Water	■					■	■	VOC-free associative thickener (HEUR), very newtonian flow, highest ICI values
OPTIFLO-TVS VF	12,5	Water	■			□	■		■	Associative thickener (HEAT), especially for tinting paste systems

Acrylate Thickeners

OPTIFLO-HV 80	30	Water	■			■	□		■	Associative thickener (HASE)
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Synthetic Layered Silicates

LAPONITE-EP	100	Powder			■		■		□	■	Organic-modified product with increased effectivity at medium shear
LAPONITE-RD	100	Powder			■	■			□	■	Standard recommendation for universal use
LAPONITE-RDS	100	Powder			■	■			□	■	Easier to disperse than LAPONITE-RD
LAPONITE-S 482	100	Powder		□	■	■			□	■	For individual premix production; for direct use; for high-solid slurries
LAPONITE-SL 25	25	Water	■			■			□	■	Ready-to-use dispersion with high solids

Hydroclays

OPTIGEL-CK	100	Powder		■	□		■			■	Standard recommendation for universal use
OPTIGEL-CG	100	Powder		■	□		■			■	For cost-optimized highly filled systems without special requirements for whiteness
OPTIGEL-CMO	100	Powder		■	□		■			■	Especially for highly filled thick-layer systems
OPTIGEL-LX	100	Powder		■			■		■	□	For cosolvent-free emulsion paints
OPTIGEL-W 724	100	Powder		■			■		■	□	Organic-modified, high water-resistance (e.g. heavy duty coatings)
OPTIGEL-WA	100	Powder		■			■		■	□	Organic-modified, to increase in-can viscosity
OPTIGEL-WM	100	Powder		■			■		■	□	Organic-modified, increases water retention and thus the open-time
OPTIGEL-WX	100	Powder		■	□		■		■	□	Organic-modified, for universal use; excellent anti-settling

■ especially recommended □ recommended

HASE = Hydrophobic modified Alkali-Swellable Emulsion
HEUR = Hydrophobic Ethoxylated Urethane

Only available: *NAFTA and Europe, **USA and Europe

HEAT = Hydrophobic Ethoxylated Aminoplast Technology

Surface Additives: Silicones, Waxes and Others

Silicone Additives to Reduce Surface Tension

	Surface tension reduction		Substrate wetting	Surface slip	Leveling	Reactive group
	Strong	Medium				
BYK-302		■	□	□	□	
BYK-307	■		■	■		
BYK-331		■	□	□	□	
BYK-333	■		■	■		
BYK-342		■	■	□	□	
BYK-345	■		■		□	
BYK-346	■		■		□	
BYK-347	■		■		□	
BYK-348	■		■		□	
BYK-349	■		■		□	
BYK-375	■		■	■		Hydroxyl
BYK-377	■		■	■		Hydroxyl
BYK-378	■		■	■	□	
BYK-3455	■		■		□	
BYK-SILCLEAN 3720	□		Improved cleanability (easy-clean)			Hydroxyl

■ especially recommended □ recommended

Wax Additives, Aqueous Dispersions and Emulsions

	Melting point (Wax)		Scratch resistance	Abrasion resistance	Surface slip	Orientation of effect pigments	Water repellency, anti-blocking	Gloss reduction	Soft-feel effect
	°C	°F							
AQUACER 497	60	140			□		■		
AQUACER 501	130	266	■						
AQUACER 507	130	266			□	□			
AQUACER 513	135	275	■	■					
AQUACER 526	105	221				■			
AQUACER 527	105	221				■			
AQUACER 531	130	266	□	■	□				
AQUACER 532	130	266	■	■	■				
AQUACER 533	95	203			■		□		
AQUACER 537	110	230			□		■		
AQUACER 539	90	194			■		■		
AQUACER 541	80	176	■		■				
AQUACER 552	130	266	■	■					
AQUACER 561	65	149			■		■		
AQUACER 593	160	320			Anti-Slip				
AQUACER 1547	125	257	■						
AQUAMAT 208	135	275	■	□				□	■
AQUAMAT 263	130	266	■				□	□	□
AQUAMAT 272	125	257	■	■	■		□	■	■
AQUATIX 8421	105	221				■			

■ especially recommended □ recommended

Wax Additives, Micronized

	Melting point (Wax)		Scratch resistance	Abrasion resistance	Gloss reduction	Texture	Soft-feel effect
	°C	°F					
CERAFLOUR 913	160	320			■	very fine	■
CERAFLOUR 914	160	320				very fine	■
CERAFLOUR 915	160	320				fine	
CERAFLOUR 916	135	275		■		medium	
CERAFLOUR 917	135	275	■			fine/medium	□
CERAFLOUR 920	200	392	■		■	coarse	■
CERAFLOUR 925	115	239	■	■	■		
CERAFLOUR 929	115	239	■	■	■		
CERAFLOUR 1000	175	347	■	■	■		■

■ especially recommended □ recommended

Crosslinkable Surface Additives (Acrylic-functional)

	Composition	Reactive diluent	Properties
BYK-UV 3500	Polyethermodified polydimethylsiloxane	-	High surface slip
BYK-UV 3505	Modified polydimethylsiloxane	TPGDA	High surface slip
BYK-UV 3530	Polyethermodified siloxane	-	
BYK-UV 3535	Modified polyether	-	Anti-slip effect, silicone-free
BYK-UV 3575	Modified polydimethylsiloxane	TPGDA	Medium surface slip
BYK-UV 3576	Modified polydimethylsiloxane	TPGDA	Low surface slip

Other Surface Additives

	Type	Usage
BYK-381	Acrylic copolymer	Improves leveling
BYK-3410	Alcohol alkoxylates	Reduction of dynamic surface tension, better wetting of low polar substrates
BYK-3440	Acrylic copolymer	Substrate wetting, fluoro-modified
BYK-3441	Acrylic copolymer	Improves leveling, fluoro-modified polyacrylate
BYK-3560	Polyether macromer-modified polyacrylate	Increases surface energy of the cured paint film
BYK-DYNWET 800	Alcohol alkoxylates	Reduction of dynamic surface tension, improved substrate wetting
BYKETOL-AQ	Low molecular weight surface active polymers	Improves leveling, prevents bubbles and boiling marks
BYKETOL-PC	Modified urea	Prevents drying-out and caking of aqueous pigment concentrates
BYKETOL-WS	Low molecular weight surface active polymers	Improves leveling, prevents bubbles and boiling marks
NANOBYK-3600	Aluminum oxide nanoparticles	Improves scratch resistance

Adhesion Promoters

	Improved adhesion on	Recommended for
BYK-4500	Aged paint work (pigmented)	Emulsion paints, alkyd emulsions
BYK-4509	Steel, galvanized steel, aluminum, glass	Baking and 2-pack systems
BYK-4513	Metals	2-pack epoxides



For more information about our additives and instruments, as well as our additive sample orders please visit:

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Additive Guide



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This issue replaces all previous versions – Printed in Germany