



Wood furniture developments

ESACOTE[®] AC 565

Low cosolvent demand self crosslinking binder with excellent stain resistance



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ESACOTE[®] AC 565



- Anionic self X-linking PAC
- Solvent and APEO free
- High gloss and clarity
- Good hardness
- Excellent stain resistance in 1K formulations



- Suitable for sealers, primers and top coats
- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Typical values

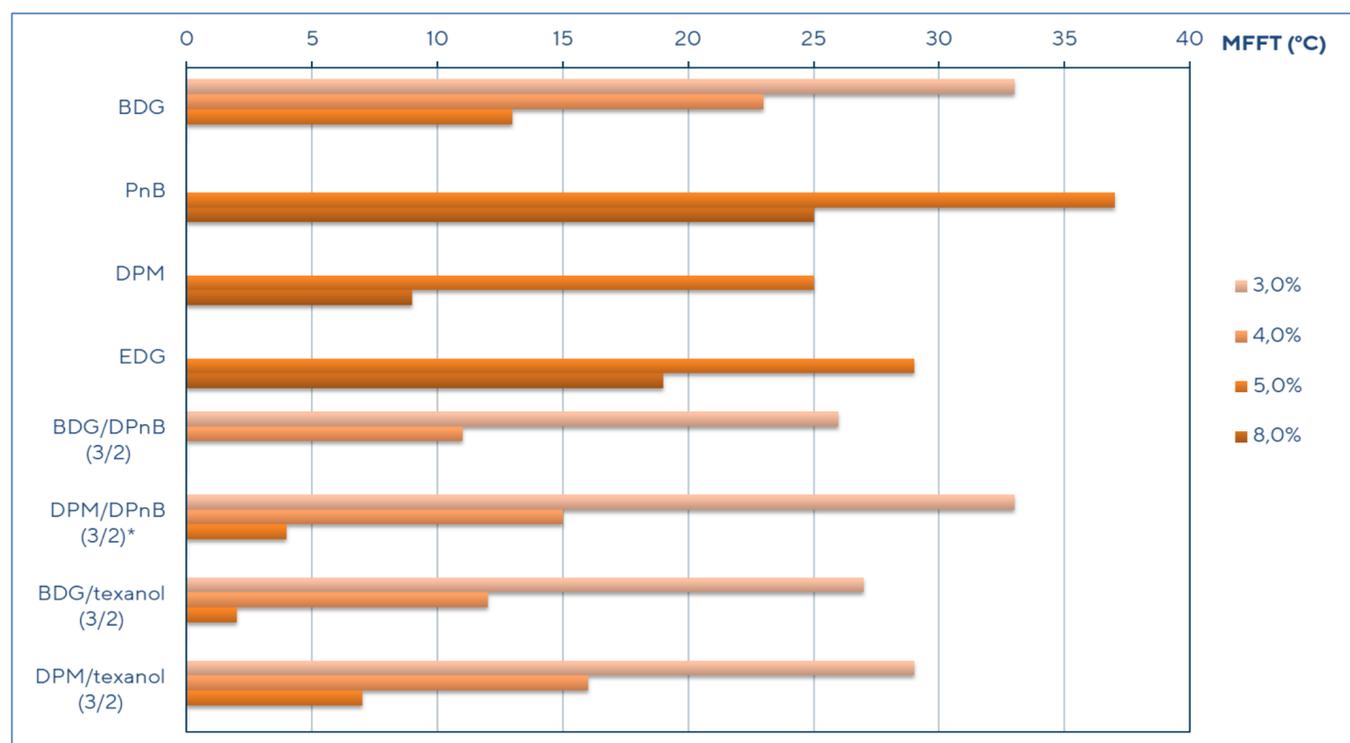
Appearance at 25 °C:	milky liquid
pH: (at 25°C on supplied product, ASTM E 70):	7.0-8.0
Viscosity (mPa.s): (Brookfield RVT @ 25 °C, 20 rpm spindle 2)	< 500
Solid content, %:	39.0-41.0

Product properties

Solvent content, %:	0%
Minimal film forming temperature, °C:	~55
Density @ 25°C, g/ml	~1.05
Koenig hardness (sec):	~125
Film aspect:	transparent and glossy



ESACOTE® AC 565: MFFT reduction



Stability AC 565 with co-solvents at 50°C				
Co-solvent	Starting point	7 days	15 days	21 days
5% DPM/DPnB (3/2)	64 Cps	64 Cps	60 Cps (precipitate)	60 Cps (precipitate)
8% DPM/DPnB (3/2)	72 Cps	64 Cps	48 Cps (precipitate)	64 Cps (precipitate)
5% Butyldiglicol	72 Cps	72 Cps	68 Cps	72 Cps
8% Butyldiglicol	88 Cps	72 Cps	68 Cps	72 Cps

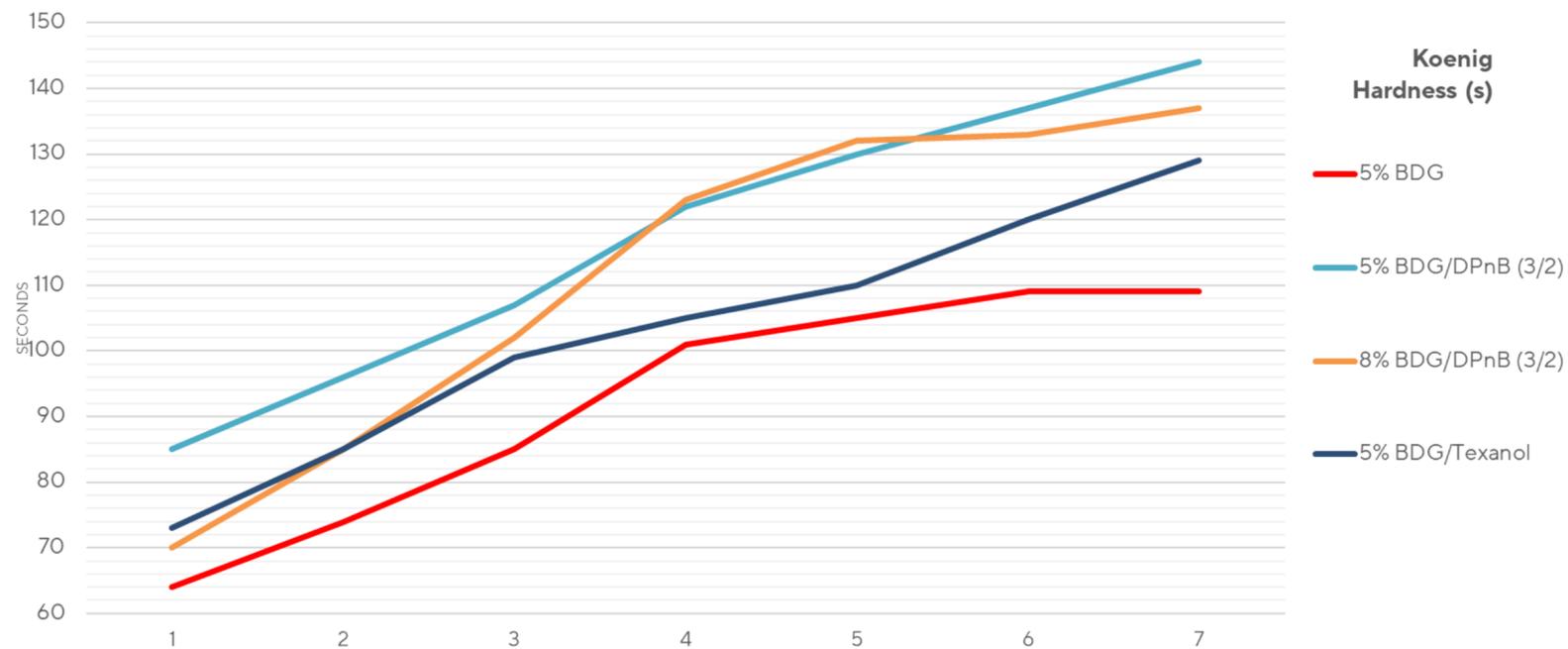
Butylglycol (BG) is not compatible with ESACOTE AC 565



ESACOTE® AC 565: Koenig hardness

Koenig hardness (seconds) ESACOTE AC 565 with co-solvents							
Co-solvent	1 day	2 days	3 days	4 days	5 days	6 days	7 days
5% BDG	64	74	85	101	105	109	109
8% BDG	64	74	85	105	109	119	119
5% DPM/DPnB (3/2)*	69	80	92	101	108	111	115
8% DPM/DPnB (3/2)*	67	85	98	110	115	125	125
5% BDG/DPnB (3/2)	85	96	107	122	130	137	144
8% BDG/DPnB (3/2)	70	85	102	123	132	133	137
5% BDG/Texanol	73	85	99	105	110	120	129

** ESACOTE AC 565 with DPM/DPnB (3/2) co-solvent mix is not stable.



ESACOTE[®] AC 565

Starting formulations



1K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 565	80.0
B1	Wetting agent (Münzing)	EDAPLAN 451	0.5
C1	Defoamer (BYK)	BYK 028	0.5
D1	Defoamer (BYK)	BYK 1724	0.5
E1	Coalescent (DOW)	BUTYL DIGLYCOL	4.0
F1	Demi water	WATER	12.9
G1	Surface additive (BYK)	BYK 333	0.1
H1	Demi water	VISCOLAM® PS 170 AIR (20% diluted)	1.5
Total			100.0

Solid Content ≈ 33%

Brookfiled RVT Vx 50 rpm – Spindle 2 -20 °C ≈ 90 cps

Formulation	Gloss (25°)	Gloss (60°)
AC 565 1K	47	84

Formulation	Water 1h	Water 8h	Water 16h
AC 565 1K	5	5	5

Chemical and stain resistance EN 12720 – 1K on veneered walnut

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Acetone 10 min	Sun cream 1h	Nivea Cream 1h	Oliv oil 1h
AC 565 1K	2	3	5	1-2	4	5	5

Stain resistance EN 12720 – 1K on solid maple

Formulation	Mustard 1h	Shoe polish 1h	Coffee (40g/L) 1h	Ketchup 1h	Betadine 1h
AC 565 1K	5	3	5	5	3-4



1K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 565	80.0
B1	Wetting agent (Münzing)	EDAPLAN 451	0.5
C1	Defoamer (BYK)	BYK 028	0.5
D1	Defoamer (BYK)	BYK 1724	0.5
E1	Coalescent (DOW)	BDG / DPnB (3:2)	5.0
F1	Demi water	WATER	11.9
G1	Surface additive (BYK)	BYK 333	0.1
H1	Demi water	VISCOLAM® PS 170 AIR (20% diluted)	1.5
Total			100.0

Solid Content ≈ 33%

Brookfiled RVT Vx 50 rpm – Spindle 2 -20 °C ≈ 90 cps

Formulation	Gloss (25°)	Gloss (60°)
AC 565 1K	47	84

Formulation	Water 1h	Water 8h	Water 16h
AC 565 1K	5	5	5

Chemical and stain resistance EN 12720 – 1K on veneered walnut

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Acetone 10 min	Sun cream 1h	Nivea Cream 1h	Oliv oil 1h
AC 565 1K	2	4	5	1-2	4	5	5

Stain resistance EN 12720 – 1K on solid maple

Formulation	Mustard 1h	Shoe polish 1h	Coffee (40g/L) 1h	Ketchup 1h	Betadine 1h
AC 565 1K	5	3	5	5	3-4

1K GLOSSY WHITE TOP COAT

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	64.0
B1	Coalescent (DOW)	BUTYL DIGLYCOL	3.6
C1	Demi water	WATER	3.6
D1	Wetting agent (Munzing)	EDAPLAN 451	0.4
E1	Defoamer (BYK)	BYK 028	0.4
F1	Surface additive (BYK)	BYK 333	0.1
K1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.3
L1	Titanium dioxide paste	WHITE PASTE 2081	20.0
Total			100.0

	White paste 2081	Trade name	% w/w
A1	Dispersant (BYK)	DISPERBYK 2081	4.17
B1	Demi water	WATER	20.46
C1	Titanium dioxide (Kronos)	KRONOS 2310	74.22
D1	Rheology additive	VISCOLAM® PS 202	1.15
Total			100.0

Solid Content ≈ 42%

Brookfiled RVT Vx 20 rpm – Spindle 3 -20 °C ≈ 3300 cps





1K GLOSSY WHITE TOP COAT

Formulation	Gloss (20/60/85°)
F1PW29-2022 1K	40 / 72 / 95

Chemical and stain resistance EN 12720 - 1K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Ethanol 48% - 16h	Ethanol 94% - 1h	Acetic A. 10% 1h	Olive oil 1h	Sun cream 1h
F1PW29-2022 1K	4-5	3	1-2	2	5	5	2-3

Formula	Water 1h	Water 16h	Coffee (40g/L) 1h	Coffee (40g/L) 16h	Mustard 1h	Shoe polish (kiwi) 1h	Betadine (in water) 1h
F1PW29-2022 1K	5	5	3	2-3	3-4	2	3

Formula	Bic pen 1h	Lipstick 1h	Marker 1h	Ketchup 1h
F1PW29-2022 1K	3	4-5	1-2	5

1K GLOSSY WHITE TOP COAT

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	64.0
B1	Coalescent (DOW)	BDG / DPnB (3:2)	4.0
C1	Demi water	WATER	4.0
D1	Wetting agent (Munzing)	EDAPLAN 451	0.4
E1	Defoamer (BYK)	BYK 028	0.4
F1	Surface additive (BYK)	BYK 333	0.1
K1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	1.67
L1	Titanium dioxide paste	WHITE PASTE 2081	20.0
Total			100.0

	White paste 2081	Trade name	% w/w
A1	Dispersant (BYK)	DISPERBYK 2081	4.17
B1	Demi water	WATER	20.46
C1	Titanium dioxide (Kronos)	KRONOS 2310	74.22
D1	Rheology additive	VISCOLAM® PS 202	1.15
Total			100.0

Solid Content ≈ 41%

Brookfiled RVT Vx 20 rpm – Spindle 4 -20 °C ≈ 1600 cps





1K GLOSSY WHITE TOP COAT

Formulation	Gloss (20/60/85°)
F16PW29-2022 1K	39 / 73 / 94

Chemical and stain resistance EN 12720 - 1K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Ethanol 48% - 16h	Ethanol 94% - 1h	Acetic A. 10% 1h	Olive oil 1h	Sun cream 1h
F16PW29-2022 1K	5	3	1-2	2	5	5	2

Formula	Water 1h	Water 16h	Coffee (40g/L) 1h	Coffee (40g/L) 16h	Mustard 1h	Shoe polish (kiwi) 1h	Betadine (in water) 1h
F16PW29-2022 1K	5	5	3	2-3	5	3	3

Formula	Bic pen 1h	Lipstick 1h	Marker 1h	Ketchup 1h
F16PW29-2022 1K	2	4-5	1	5

2K GLOSSY WHITE TOP COAT

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	64.0
B1	Coalescent (DOW)	BUTYL DIGLYCOL	3.6
C1	Demi water	WATER	3.6
D1	Wetting agent (Munzing)	EDAPLAN 451	0.4
E1	Defoamer (BYK)	BYK 028	0.4
F1	Surface additive (BYK)	BYK 333	0.1
G1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.3
H1	Demi water	WATER	5.6
I1	Titanium dioxide paste	WHITE PASTE 2081	20.0
L1	Isocyanic crosslinker (Covestro)	BAYHYDUR 2655 (80% in propylene carbonate)	10.0
Total			110.0

Solid Content ≈ 42%





2K GLOSSY WHITE TOP COAT

Formulation	Gloss (20/60/85°)
F1PW29-2022 2K	42 / 75 / 96

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Ethanol 48% - 16h	Ethanol 94% - 1h	Acetic A. 10% 1h	Olive oil 1h	Sun cream 1h
F1PW29-2022 2K	5	5	4	1-2	4	5	3-4

Formula	Water 1h	Water 16h	Coffee (40g/L) 1h	Coffee (40g/L) 16h	Mustard 1h	Shoe polish (kiwi) 1h	Betadine (in water) 1h
F1PW29-2022 2K	5	5	3	2-3	3-4	2-3	3

Formula	Bic pen 1h	Lipstick 1h	Marker 1h	Ketchup 1h
F1PW29-2022 2K	4-5	3	2	5

1K ANTI STAIN WHITE TOP COAT

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	51.0
B1	Titanium dioxide paste	WHITE PASTE 2081	20.0
C1	Coalescent (DOW)	BUTYL DIGLYCOL	3.50
D1	Demi water	WATER	8.50
E1	AC beads	SPHEROMERS® CA-6	10.00
F1	Wetting agent (Munzing)	EDAPLAN 451	0.38
G1	Defoamer (BYK)	BYK 028	0.38
H1	PE wax dispersion	ADIWAX H 05 CW	4.00
I1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.24
Total			100.0

Solid Content ≈ 47%





1K ANTI STAIN WHITE TOP COAT

Formulation	Gloss (20/60/85°)
F04W54-2024	1.7 / 7.9 / 14

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Ethanol 48% - 16h	Acetic A. 10% 1h	Olive oil 1h	Sun cream 1h	BIC pend 1h
F04W54-2024	5	5	4	4	5	3-4	4-5

Formula	Water 1h	Water 16h	Coffee (40g/L) 1h	Coffee (40g/L) 16h	Mustard 1h	Ketchup 1h	Betadine (in water) 1h
F04W54-2024	5	5	3	2-3	3-4	5	3



1K TEXTURED PIGMENTED TOP COAT

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	51.0
B1	Pigmented paste	PASTA RAL DESIGN 280-20-30	10.0
C1	Coalescent (DOW)	BUTYL DIGLYCOL	3.50
D1	Demi water	WATER	18.50
E1	AC beads	SPHEROMERS® CA-20	10.00
F1	Wetting agent (Munzing)	EDAPLAN 451	0.38
G1	Defoamer (BYK)	BYK 028	0.38
H1	PE wax dispersion	ADIWAX H 05 CW	4.00
I1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.24
Total			100.0

Solid Content ≈ 47%





1K TEXTURED PIGMENTED TOP COAT

Formulation	Gloss (20/60/85°)
F04W54-2024	1.8 / 5.0 / 3,0

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Ethanol 48% - 16h	Acetic A. 10% 1h	Olive oil 1h	Sun cream 1h	BIC pend 1h
F04W54-2024	5	5	4	4	5	3-4	4-5

Formula	Water 1h	Water 16h	Coffee (40g/L) 1h	Coffee (40g/L) 16h	Mustard 1h	Ketchup 1h	Betadine (in water) 1h
F04W54-2024	5	5	3	2-3	3-4	5	3

