



Wood furniture developments

ESACOTE[®] AC 565

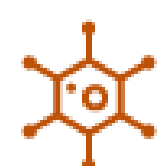
Low cosolvent demand self crosslinking binder with excellent stain resistance



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ESACOTE® AC 565



- Anionic self X-linking PAC
- Solvent and APEO free
- Good film formation properties and hardness development
- High gloss
- Excellent stain resistance to food ingredients



- Specifically designed for pigmented systems
- Suitable for clear systems
- Suitable for 1K and 2K systems
- 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

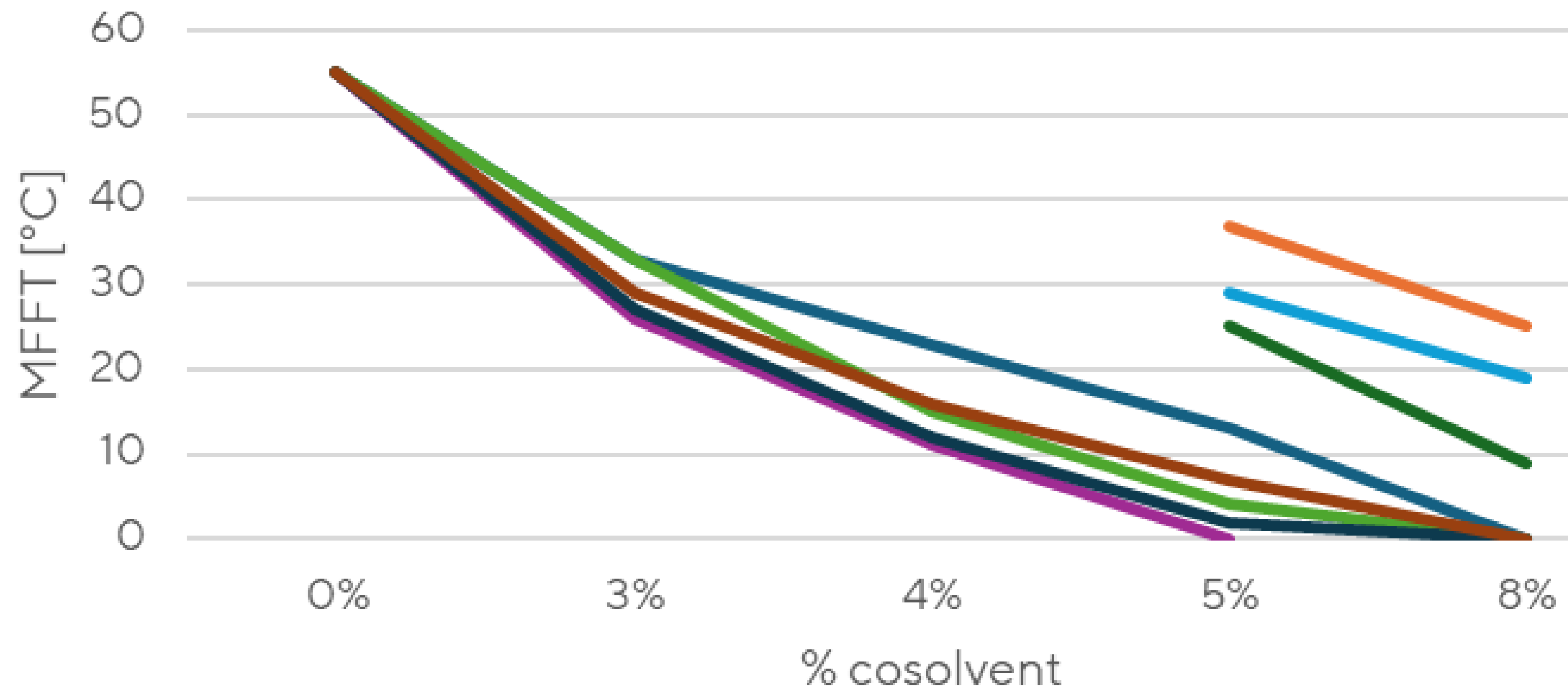


ESACOTE® AC 565: MFFT reduction & Koenig hardness

Co-solvent	MFFT (°C)				
	0,0%	3,0%	4,0%	5,0%	8,0%
BDG - Butyl diglycol	55	33	23	13	0
Dowanol PnB (1:1 in water)	55			37	25
Dowanol DPM	55			25	9
Ethyl diglycol - EDG	55			29	19
BDG/DPnB (3/2)	55	26	11	0	0
DPM/DPnB (3/2)**	55	33	15	4	0
BDG/texanol (3/2)	55	27	12	2	0
DPM/texanol (3/2)	55	29	16	7	0

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% 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 (3/2)	73	85	99	105	110	120	129

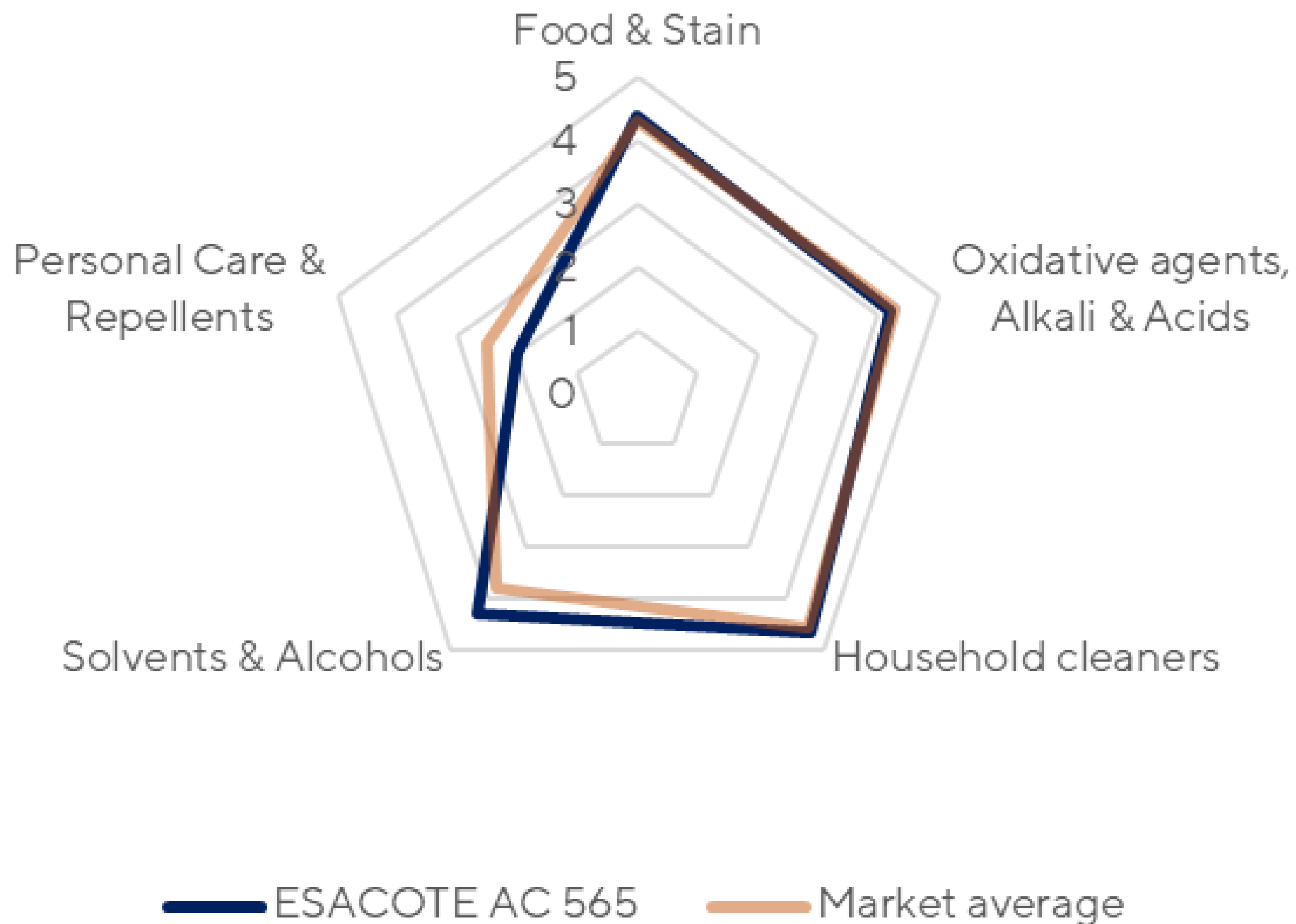
ESACOTE[®] AC 565: MFFT reduction



- Responsive to co-solvents, enabling low MFFT with limited VOC contribution
- High intrinsic MFFT lead to harder film
- Strong response to co-solvents addition allow low dosage for reaching application conditions

BDG DPnB DPM
EDG BDG/DPnB 3:2 DPB/DPnB 3:2
BDG/Texanol 3:2 DPM/Texanol 3:2

ESACOTE® AC 565: Chemical & stain resistance



- Outstanding resistance to food and stain substances
- High resistance to oxidizing agents (bleach, hydrogen peroxide)
- Consistent performance across household cleaners and alkaline detergents
- Stable under exposure to alcohol-based and hydrocarbon solvents
- **Balanced multi-chemical resistance profile for demanding indoor applications**

ESACOTE® AC 565: Main characteristics

- Binder very easy to be formulated
- Good film formation properties and hardness development
- High gloss
- Very good chemical resistances (cleaners, solvents, alcohols...)
- Excellent **stain resistance** to food ingredients
- Suitable for **pigmented** or clear systems
- Suitable for **1K** and 2K systems
- Extra boost by **SPHEROMERS CA-6**



ESACOTE[®] AC 565

Starting formulations



1K GLOSSY CLEAR TOP COATS

		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

		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%

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

Formulation	Gloss (25°)		Gloss (60°)	
AC 565 1K #1	47		84	
Formulation	Water	Water	Water	
	1h	8h	16h	
AC 565 1K #1	5	5	5	
Formulation	Coffee 40 g/L	Ketchup	Mustard	
	1h	1h	1h	
AC 565 1K #1	5	5	5	



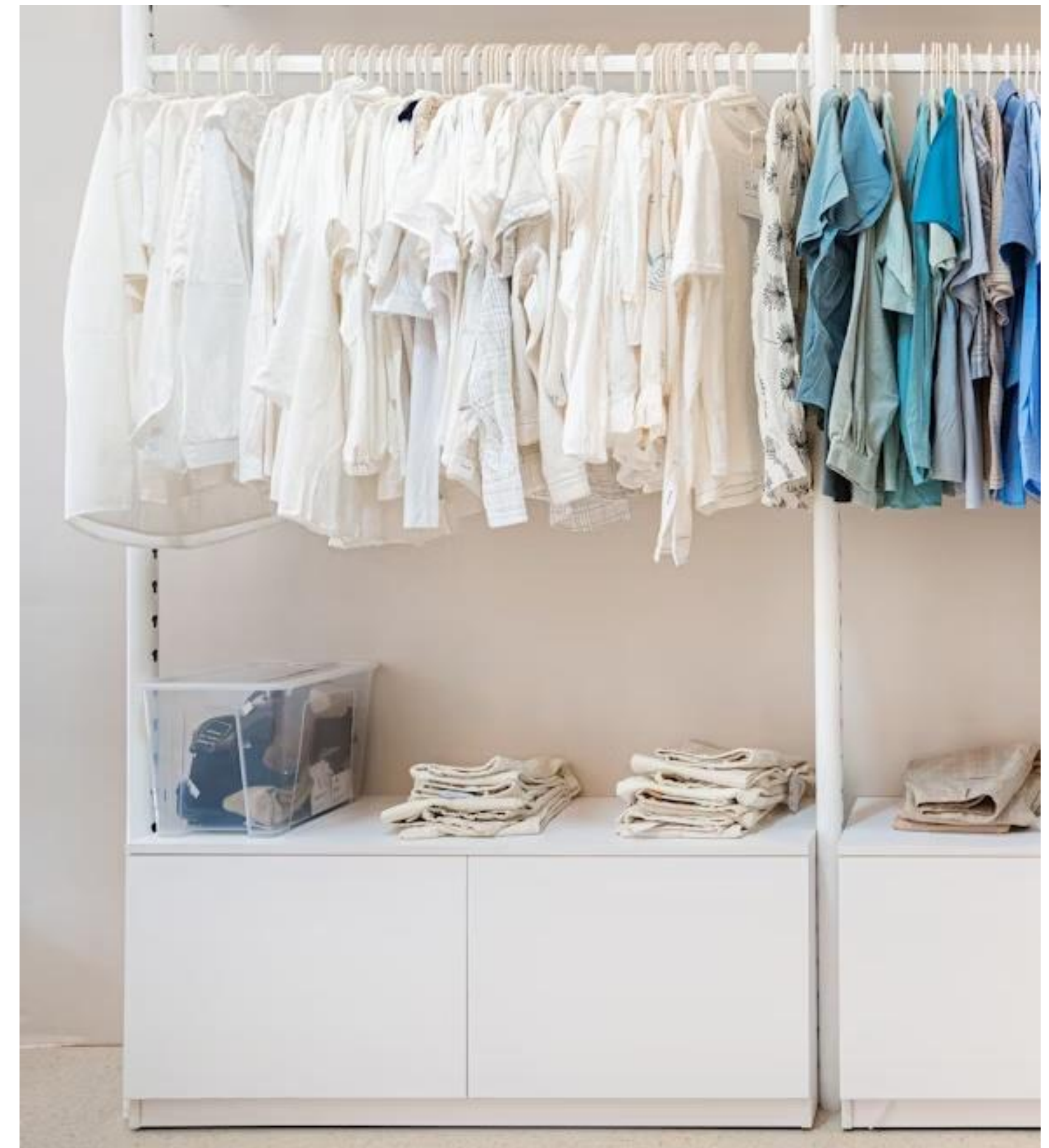
1K GLOSSY WHITE TOP COAT

	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



Formulation

F1PW29-2022 1K

Gloss (20/60/85°)

40 / 72 / 95

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



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



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%

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





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


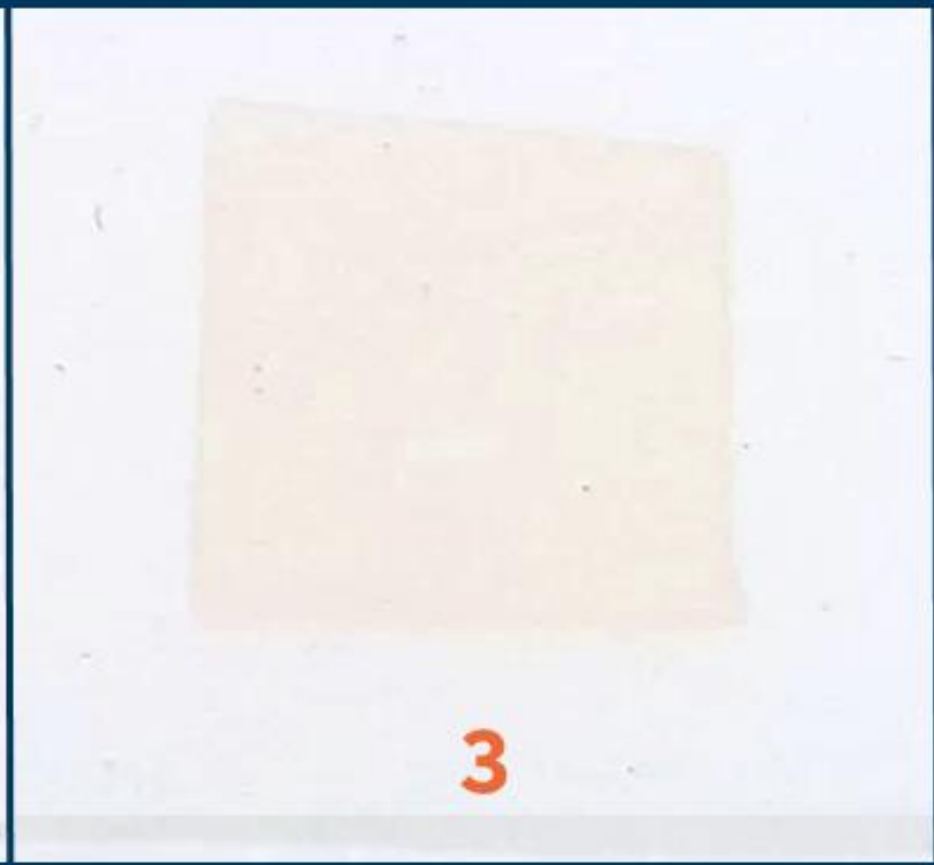
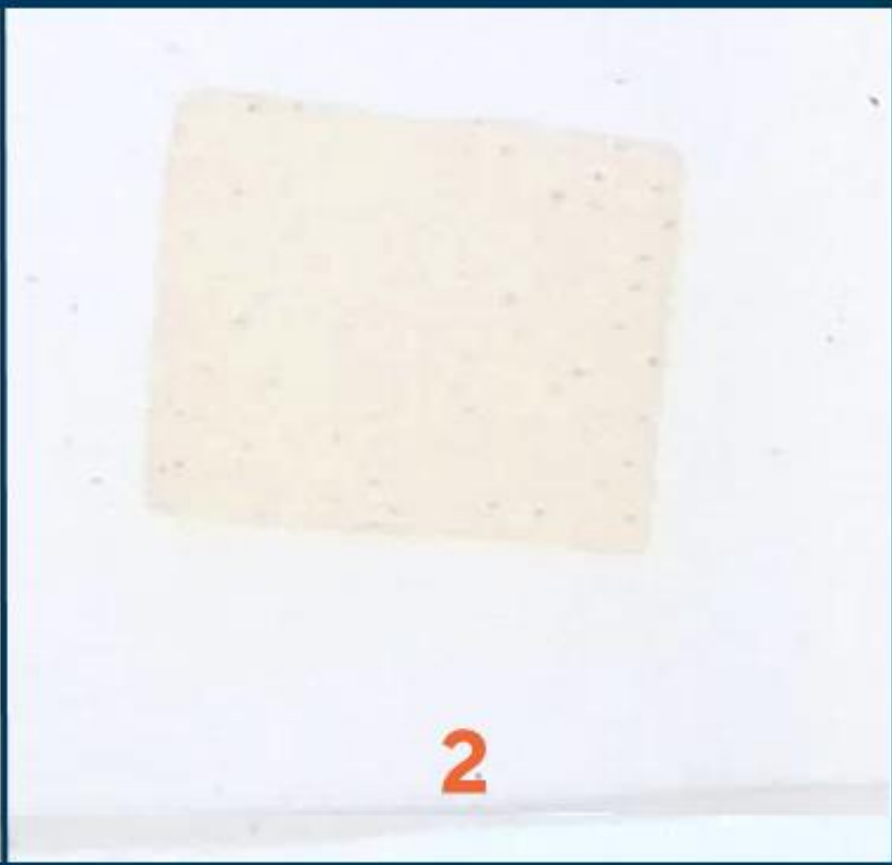
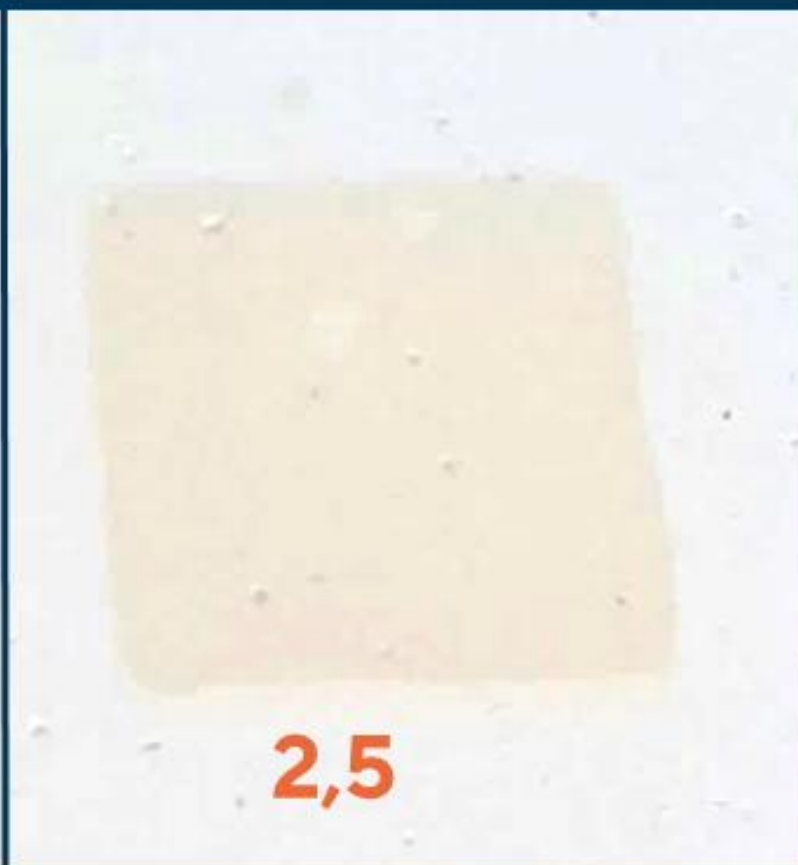


Solid Content ≈ 47%

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





ESACOTE® AC 565: Antistain synergistic effect with CA-6

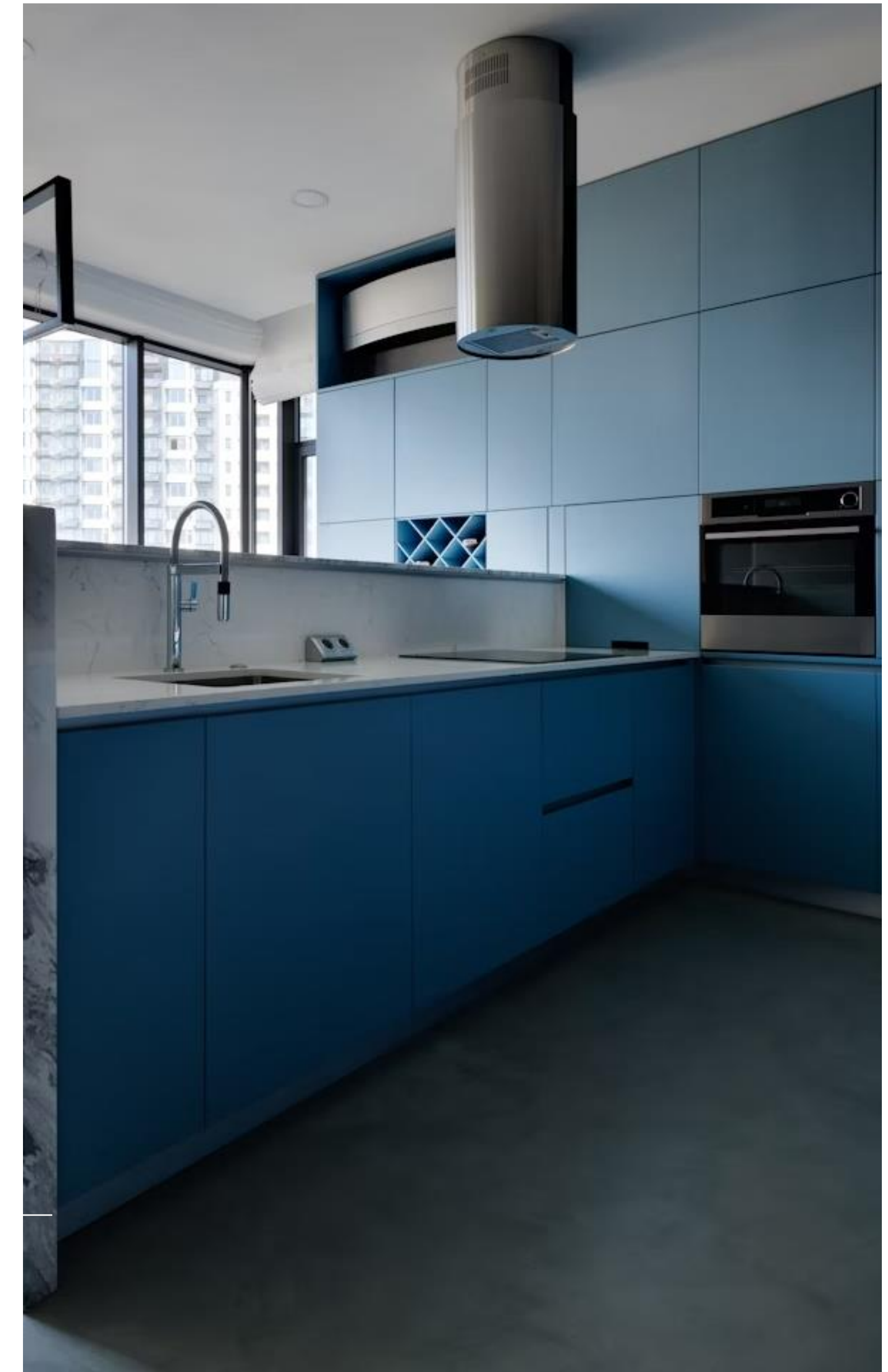
	1 hour	6 hours	16 hours
AC 565 Spheromers® CA 6 EN 12720	 4	 3	 2
AC 565 Silica EN 12720	 2,5	 2	 2

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%

Formulation	Gloss (20/60/85°)
F04W54-2024	1.8 / 5.0 / 3.0



1K GLOSSY WHITE PRIMER (with good adhesion on ABS profiles)

	F1PW29-2022 (1K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 565	50.0
B1	White paste	WHITE PASTE F2W3-2020	15.0
C1	Talc (Imerys)	LUZENAC A10H	20.0
D1	Additive	Na HEXAMETAPHOSPHATE (20%)	1.0
E1	Wetting agent (Munzing)	EDAPLAN 451	0.5
F1	Defoamer (Evonik)	TEGO FOAMEX 902 W	0.5
G1	Defoamet (BYK)	BYK 028	0.5
H1	Wetting agent	BAMAX 104 50%	0.5
I1	Coalescent (DOW)	BUTYL DIGLYCOL (BDG)	3.0
I2	Demi water	WATER	3.7
L1	Rheological additive	VISCOLAM® PS 170 AIR (20%)	5.3
Total			100.0

	White paste F2W3-2020	Trade name	% w/w
A1	Dispersant	FLUIJET 1725	8.0
B1	Demi water	WATER	16.4
C1	Titanium dioxide (Kronos)	KRONOS 2310	75.0
D1	Wetting agent (BYK)	BYK 349	0.3
E1	Defoamer (BYK)	BYK 024	0.3
Total			100.0



