



Wood Furniture

Water based and sustainable solutions for superior coatings



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Outline

- WB binders for sealers
- WB binders for antistain primers
- WB binders for top coats
- Polymeric matting agents
- Rheology modifiers
- Crosslinkers
- Waxes



Binders for sealers

ESACOTE[®] AC, ESACOTE[®] PU, ESACOTE[®] UA

ESACOTE® AC 202



- Anionic self X-linking PAC
- High gloss and clarity
- Quick drying
- Good sandability
- Excellent chemical resistance
- Excellent adhesion on wood and melamine



- 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, %:	42.0-44.0

Product properties

Solvent content, %:	0%
Minimal film forming temperature, °C:	~50
Density @ 25°C, g/ml	~1.05
Koenig hardness (sec):	~85
Film aspect:	transparent and glossy



TRANSPARENT 1K SEALER

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	77.0
B1	Coalescent (DOW)	BUTYL CARBITOL	6.0
B2	Demi water	WATER	6.3
C1	Wetting agent	BAMAX 104 PG	0.5
D1	Sanding agent	LAMKOTE RO	3.7
E1	Defoamer (BYK)	BYK 028	0.5
G1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	6.0
Total			100.0

Solid Content ≈ 33%

Brookfield Vx RVT 50 rpm spindle 3 20 °C = 850 cps



ESACOTE[®] AC 301



- Hydroxyil AC emulsion
- Solvent and APEO free
- Very good sandability



- 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 (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 2)	<500
Solid content, %:	39.0-41.0

Product properties

Solvent content, %:	0
Density, @ 25°C g/ml:	~1.03
Minimal film forming temperature, °C:	~60
Koenig hardness (s)	~95
Hydroxyl content on solids (mg KOH/g):	~58
Film aspect:	tough, transparent and glossy

TRANSPARENT 2K SEALER

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	76.0
B1	Defoamer (BYK)	BYK 024	0.5
C1	Wetting agent (Münzing)	EDAPLAN 451	0.5
D1	Sanding agent	LAMKOTE RO	4.0
E1	Coalescent (DOW)	BUTYL CARBITOL	3.0
E2	Coalescent (DOW)	DOWANOL DPM	3.0
E2	Demi water	WATER	9.0
F1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	4.0
G1		CROSSLINKER 08 LM	10
Total			110.0

Solid Content ≈ 33.4%

Brookfield Vx RVT 50 rpm spindle 3 20 °C = 980 cps



ESACOTE® BIO 2249



- Anionic self X-linking urethane acrylic
- Low VOC
- Good hardness development
- Good stain and chemical resistance in 1K/2K formulations



- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Sustainability features

ESACOTE® BIO 2249 is made with raw materials from vegetal sources, obtained from plant-derived substances.

Biobased Content calculated on product anhydrous according to EN 16785:2 : **17%**

Typical values

Visual Appearance at 25 °C:	opalescent liquid
pH at 25°C (on supplied product, ASTM E 70):	7.0-9.0
Viscosity (cPs) (on supplied product, Brookfield RVT @ 25 °C, 50 rpm spindle 2):	< 500
Solid content, %:	34.0-36.0

Product properties

Solvent content, %:	<0.35 (MEK)
Density, g/ml	1.01 - 1.05
Minimal film forming temperature, °C:	~50°C
Film aspect	tough, transparent and glossy
Koenig Hardness (s)	~140



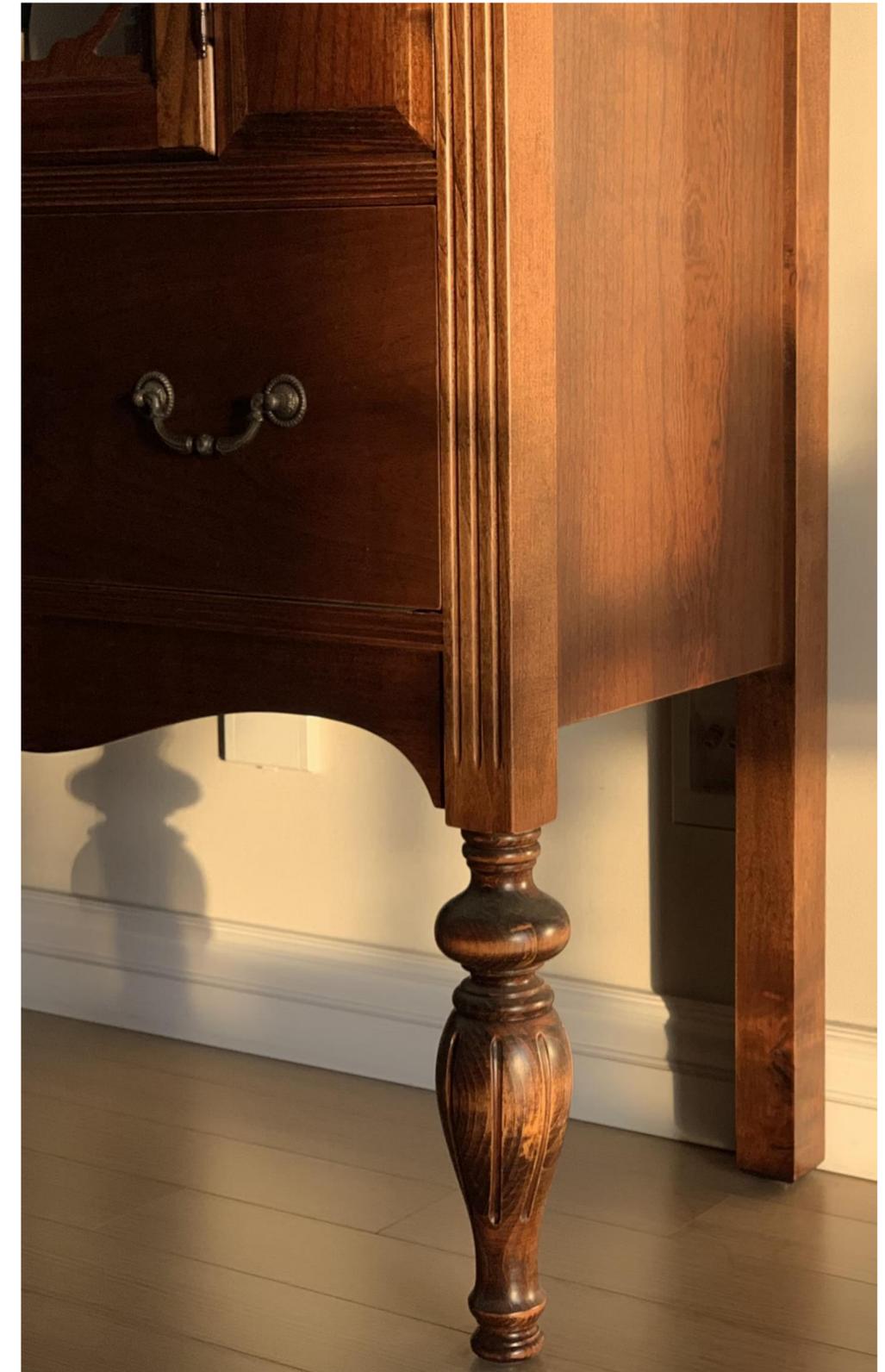
RENEWABLE TRANSPARENT 1K SEALER

		Trade name	% w/w
A1	Binder	ESACOTE® BIO 2249	75.0
B1	Sanding agent	LAMKOTE RO	4.0
B2	Coalescent (DOW)	BUTYL CARBITOL	5.0
C1	Demi water	WATER	5.0
D1	Wetting agent (Munzing)	EDAPLAN 451	0.5
E1	Defoamer (BYK)	BYK 028	0.5
G1	Rheology modifier	VISCOLAM® PS BIO 202 AIR	6.0
I1	Rheology modifier	VISCOLAM® PS BIO 170 AIR (diluted 20%)	4.0
Total			100.0

Solid Content ≈ 30%

Ford cup 4 Vx = 1'

Renewable content on solid ≈ 24%



ESACOTE® UA 7023



- Anionic self X-linking PUD
- Solvent free
- Quick drying
- High gloss and clarity
- Good hardness development
- Good mechanical and chemical resistance
- Good stain resistance



- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Typical values

Appearance at 25 °C:	opalescent liquid
pH: (at 25°C on supplied product, ASTM E 70):	7.0-9.0
Viscosity (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 1)	<300
Solid content, %:	34.0-36.0

Product properties

Solvent content, %:	0%
Density, @ 25°C g/ml:	1.01-1.03
Minimal film forming temperature, °C:	~60
Koenig hardness (s)	~140
Film aspect:	hard, transparent and glossy

TRANSPARENT 1K SEALER

		Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	76.0
B1	Coalescent (DOW)	BUTYL CARBITOL	8.0
B2	Demi water	WATER	8.0
C1	Wetting agent (Munzing)	EDAPLAN 451	0.5
D1	Sanding agent	LAMKOTE RO	4.0
F1	Defoamer (Evonik)	TEGO AIREX 904 W	0.1
G1	Defoamer (BYK)	BYK 024	0.5
I1	Rheology modifier	VISCOLAM PS 170 AIR (diluted 20%)	2.9
Total			100.0

Solid Content ≈ 30%
Ford cup 4 Vx = 25"



Binders for antistain primers

ESACOTE[®] AC, ESACOTE[®] PU, ESACOTE[®] UA

ESACOTE® AC 126



- Anionic acrylic emulsion
- Solvent and APEO free
- Suitable for clear and pigmented formulations



- 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):	4.0-6.0
Viscosity (mPa.s): (Brookfield RVT @ 25 °C, 20 rpm spindle 1)	<200
Solid content, %:	39.0-41.0

Product properties

Solvent content, %:	0%
Minimal film forming temperature, °C:	~19
Density @ 25°C, g/ml	1.01-1.05
Koenig hardness (sec):	~80
Film aspect:	transparent and glossy

ANTISTAIN PIGMENTED PRIMER

	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

	F33W61-2021	Trade name	% w/w
A1	Binder	ESACOTE® AC 126	42.5
B1	Titanium dioxide slurry	White paste F2W3-2020	20.0
C1	Filler (Imerys)	KAOLIN POLESTAR 200	23.5
D1	ZnO pigment (Eurochemicals)	ZnO pigment	1.5
E1	Wetting agent (BYK)	BYK 349	0.5
F1	Defoamer (BYK)	BYK 024	0.5
G1	Demi water	WATER	2.5
H1	Coalescent (DOW)	DOWANOL DPM	5.0
I1	Rheology modifier	VISCOLAM® PS 202 AIR	2.0
Total			100.0



Primer applied on solid oak	ΔL^* (360h -40°C)	Δb^* (360h -40°C)
Top coat + Primer white STD	-0.54	1.28
Top coat + F33W61-2021	-0.11	0.21

Solid Content \approx 57.8%.

Brookfield RVT Vx 20rpm - Spindle 3 - 20 °C \approx 500 cps

ESACOTE[®] AC 301



- Hydroxyil AC emulsion
- Solvent and APEO free
- Very good sandability



- 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 (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 2)	<500
Solid content, %:	39.0-41.0

Product properties

Solvent content, % :	0
Density, @ 25°C g/ml:	~1.03
Minimal film forming temperature, °C:	~60
Koenig hardness (s)	~95
Hydroxyl content on solids (mg KOH/g):	~58
Film aspect:	tough, transparent and glossy

ANTISTAIN 2K PIGMENTED PRIMER

	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

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	48.0
B1	Titanium dioxide slurry	White paste F2W3-2020	20.0
C1	Filler (Imi Fabi)	Talc HTTP2	25.3
D1	Wetting agent (Evonik)	SURFYNOL 104 PG	0.5
E1	Additive	Na hexametaphosphate (20%)	0.5
F1	Defoamer (BYK)	BYK 1724	0.5
G1	Coalescent (DOW)	BUTYL DIGLYCOL	4.0
H1	Antibubble (Evonik)	TEGO AIREX 904 W	0.2
I1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	1.0
J1	Isocyanic crosslinker	CROSSLINKER 08 LM	10
K1	Demi water	WATER	5
Total			115.0

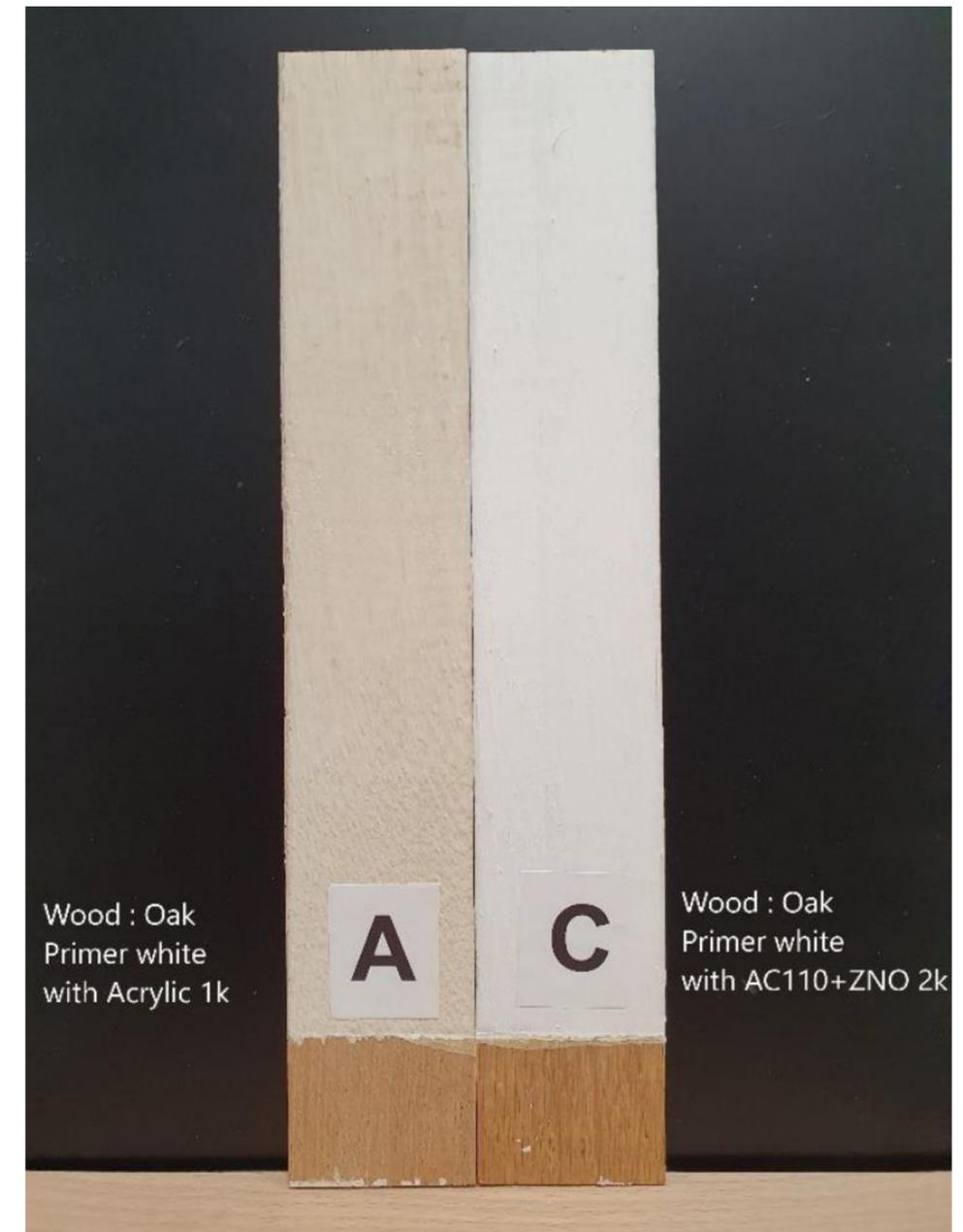
Solid Content ≈ 60%.

Brookfield RVT Vx ≈ 800 cps



STAIN BLOCKING 2K PIGMENTED PRIMER

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	28.0
B1	Defoamer (Evonik)	TEGO 825	0.5
C1	Wetting agent	BAMAX 104 (50%)	0.5
D1	Titanium dioxide (Kronos)	KROOS 2310	6.5
E1	Binder	ESACOTE® AC 301	20.0
F1	ZnO (Zinc Oxide)	ZnO Sigillo oro	1.5
G1	Filler (Imi Fabi)	TALC HTTP2	25.5
H1	Demi water	WATER	11.8
I1	Coalescent (DOW)	BUTYLGLYCOL	4.0
J1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	1.0
K1	Antibubble (Evonik)	TEGO AIREX 904 W	0.2
L1	Isocyanic crosslinker	CROSSLINKER 08 LM	10.0
M1	Demi water	WATER	5.0
Total			115.0



Binders for top coats

ESACOTE[®] AC, ESACOTE[®] UA

ESACOTE® AC 202



- Anionic self X-linking PAC
- High gloss and clarity
- Quick drying
- Good sandability
- Excellent chemical resistance
- Excellent adhesion on wood and melamine



- 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, %:	42.0-44.0

Product properties

Solvent content, %:	0%
Minimal film forming temperature, °C:	~50
Density @ 25°C, g/ml	~1.05
Koenig hardness (sec):	~85
Film aspect:	transparent and glossy



1K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	80.0
B1	Defoamer (BYK)	BYK 349	0.5
C1	Defoamer (BYK)	BYK 028	0.5
D1	Coalescent (DOW)	BUTYL CARBITOL	6.0
E1	Demi water	WATER	11.25
F1	Surface additive (BYK)	BYK 333	0.25
G1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	1.2
H1	Defoamer (BYK)	BYK 024	0.3
Total			100.0

Solid Content ≈ 34%

Brookfield viscosity 20°C ≈ 2000 - 2300 cps

Formulation	Gloss (60°)	Pencil Hardness
F10W11-2021 1K	87	HB

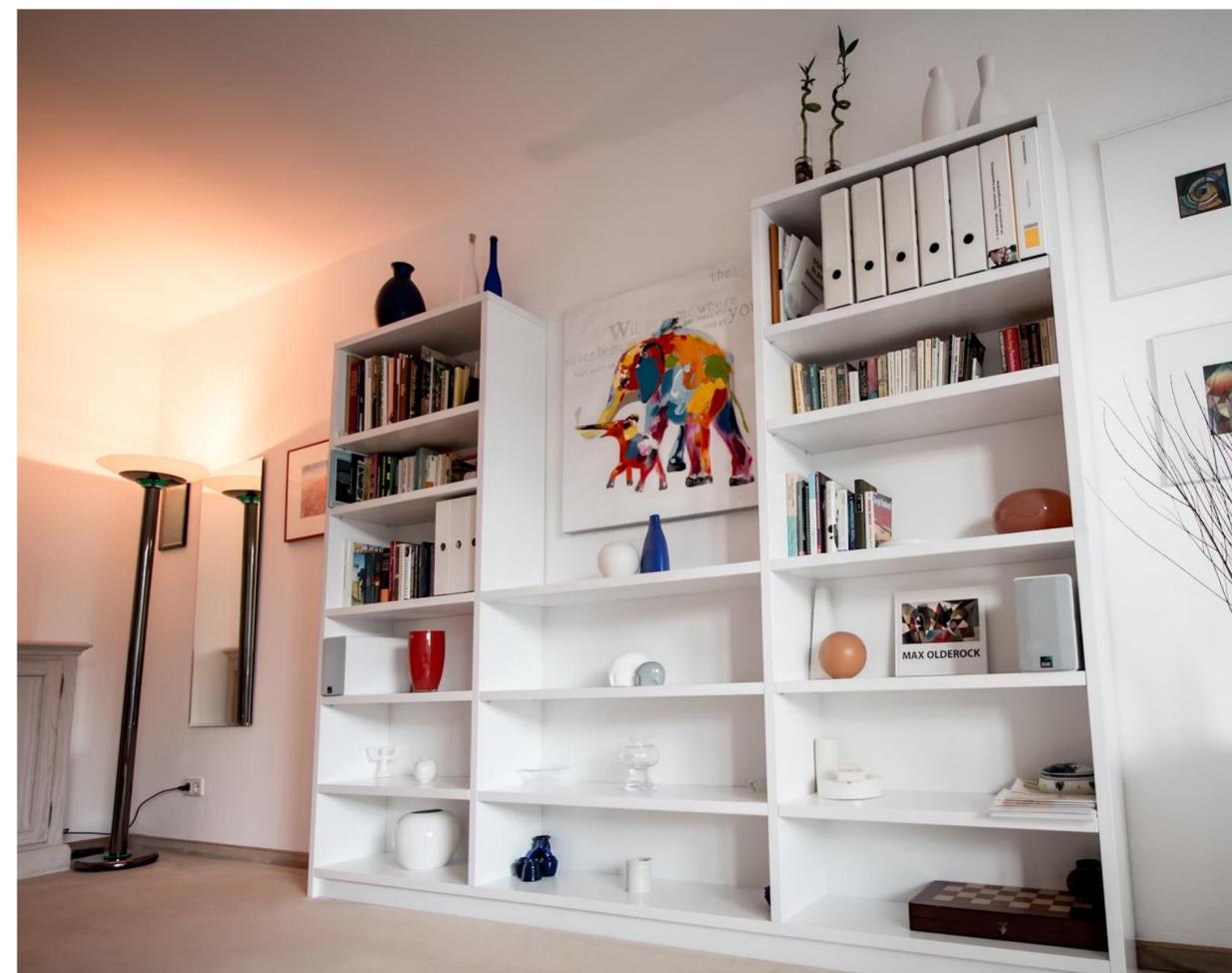
Chemical and stain resistance EN 12720 - 1K

Formulation	NH ₃ 10% - 1 h	Ethanol 48% - 1 h	Acetic Acid 10% - 1 h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1 h
F10W11-2021 1K	4	3	5	5	5	5	5

Formulation	MEK 10 min	Acetone 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 8h	Water 16h
F10W11-2021 1K	3	3	5	5	5	4	2

2K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	80.0
B1	Defoamer (BYK)	BYK 349	0.5
C1	Defoamer (BYK)	BYK 028	0.5
D1	Coalescent (DOW)	BUTYL CARBITOL	6.0
E1	Demi water	WATER	11.25
F1	Surface additive (BYK)	BYK 333	0.25
G1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	1.2
H1	Defoamer (BYK)	BYK 024	0.3
I1	Isocyanic crosslinker	CROSSLINKER 08 LM	10
Total			110.0



Solid Content ≈ 37.5%

Chemical and stain resistance EN 12720 - 2K

Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F10W11-2021 2K	4	4	5	5	5	5	5

Formula	MEK 10 min	Acetone 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 8h	Water 16h
F10W11-2021 2K	3	3	5	5	5	4	3



1K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	76.0
B1	Defoamer (BYK)	BYK 349	0.5
C1	Wax dispersion	ADIWAX H05CW	3.0
D1	Micronized wax (BYK)	CERAFLUOR 929N	0.5
E1	Matting silica (Evonik)	ACEMATT TS 100	2.0
F1	Defoamer (BYK)	BYK 028	0.5
G1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
H1	Demi water	WATER	5.5
I1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	6.0
Total			100.0

Solid Content ≈ 36%

Brookfield viscosity 20°C ≈ 800 – 900 cps

Formula	Gloss (60°)	Pencil Hardness
F10W11-2021 1K	20	HB

Chemical and stain resistance EN 12720 - 1K

Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F2W11-2021 1K	4	3	5	5	5	5	5

Formula	MEK 10 min	Acetone 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 8h	Water 16h
F2W11-2021 1K	4	4	5	5	5	1	1



2K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	76.0
B1	Defoamer (BYK)	BYK 349	0.5
C1	Wax dispersion	ADIWAX H05CW	3.0
D1	Micronized wax (BYK)	CERAFLUOR 929N	0.5
E1	Matting silica (Evonik)	ACEMATT TS 100	2.0
F1	Defoamer (BYK)	BYK 028	0.5
G1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
H1	Demi water	WATER	5.5
I1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	6.0
J1	Isocyanic crosslinker	CROSSLINKER 08 LM	10
Total			110.0

Solid Content ≈ 39%

Formula	Gloss (60°)
F2W11-2021 2K	20

Chemical and stain resistance EN 12720 - 2K

Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F2W11-2021 2K	5	4	5	5	5	5	5

Formula	MEK 10 min	Aceton 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 8h	Water 16h
F2W11-2021 2K	4	4	5	5	5	4	4



1K MATT ANTI SCRATCH TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	70.0
B1	Microbeads	DECOSPHAERA® 8-20	10.0
C1	Wax dispersion	ADIWAX H30F	3.0
D1	Coalescent (DOW)	BUTYL DIGLYCOL	5.0
E1	Demi water	WATER	6.8
F1	Wetting agent (BYK)	BYK 349	0.5
G1	Slip/mar agent (DOW)	DOWSIL 56 (50% diluted)	0.5
H1	Surface active (BYK)	BYK 342	0.2
I1	Defoamer (BYK)	BYK 1724	0.5
J1	Defoamer (BYK)	BYK 028	0.5
K1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
Total			100.0

Solid Content ≈ 43%

Brookfield viscosity - 10 rpm - Spindle 2 - 20°C ≈ 800 cps

Gloss	20°	60°	85°
F15W09-2023 1K	1.4	10	20

Chemical and stain resistance EN 12720 - 1K

Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F2W11-2021 1K	5	3	4	5	5	4	2

Formula	MEK 10 min	Nivea cream 1h	Sun cream 1h	Olive oil 1h	Betadine 1h	Water 6h	Water 16h
F2W11-2021 1K	3-4	5	5	5	2	5	5

1K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	52.0
B1	Inherently matt binder	ESACOTE® PU 980	8.0
C1	Wetting agent (Munzing)	EDAPLAN 451	0.5
D1	Defoamer(BYK)	BYK 028	0.5
E1	Slip/mar agent (DOW)	DOWSIL 51	0.25
F1	Demi water	WATER	0.25
G1	Microbeads	DECOSPHAERA® 8-20	10.0
H1	Demi water	WATER	8.8
I1	Wax dispersion	ADIWAX H 05CW	3.0
J1	Defoamer (BYK)	BYK 1724	0.5
K1	Wetting agent (BYK)	BYK 342	0.2
L1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
M1	Demi water	WATER	6.0
N1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
O1	Rheology modifier	VISCOLAM® PS 202 AIR	1.0
Total			100.0

Solid Content ≈ 35%

Brookfield viscosity 10 rpm - Spindle 2 - 20°C ≈ 1480 cps





1K MATT TOP COAT

Formulation	Gloss (60°)	Pencil Hardness
F15W6-2022 1K	6	HB

Chemical and stain resistance EN 12720 - 1K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Coffee (20g/L) 6h	Coffee (20g/L) 16h
F15W6-2022 1K	4	3	4	5	5	3-4	3-4

Formula	MEK 10 min	Aceton 10 min	Mustard 1h	Shoe polish 1h	Water 1h	Water 6h	Water 16h
F15W6-2022 1K	3	3	5	4	3-4	2	2



2K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 202	52.0
B1	Inherently matt binder	ESACOTE® PU 980	8.0
C1	Wetting agent (Munzing)	EDAPLAN 451	0.5
D1	Defoamer(BYK)	BYK 028	0.5
E1	Slip/mar agent (DOW)	DOWSIL 51	0.25
F1	Demi water	WATER	0.25
G1	Microbeads	DECOSPHAERA® 8-20	10.0
H1	Demi water	WATER	8.8
I1	Wax dispersion	ADIWAX H 05CW	3.0
J1	Defoamer (BYK)	BYK 1724	0.5
K1	Wetting agent (BYK)	BYK 342	0.2
L1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
M1	Demi water	WATER	6.0
N1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
O1	Rheology modifier	VISCOLAM® PS 202 AIR	1.0
P1	Isocyanic crosslinker	CROSSLINKER 08 LM	10
Total			110.0

Solid Content ≈ 35%

Brookfiled viscosity 10 rpm – Spindle 2 - 20°C ≈ 1480 cps





2K MATT TOP COAT

Formulation	Gloss (60°)	Pencil Hardness
F15W6-2022 2K	7	F-H

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Coffee (20g/L) 6h	Coffee (20g/L) 16h
F15W6-2022 2K	4	3	4	5	5	4	4

Formula	MEK 10 min	Aceton 10 min	Mustard 1h	Shoe polish 1h	Water 1h	Water 6h	Water 16h
F15W6-2022 2K	3-4	3-4	4	4	5	5	5



ESACOTE[®] AC 301



- Hydroxyil AC emulsion
- Solvent and APEO free
- Excellent hardness
- Very good sandability



- 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 (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 2)	<500
Solid content, %:	39.0-41.0

Product properties

Solvent content, % :	0
Density, @ 25°C g/ml:	~1.03
Minimal film forming temperature, °C:	~60
Koenig hardness (s)	~95
Hydroxyl content on solids (mg KOH/g):	~58
Film aspect:	tough, transparent and glossy



2K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	80.0
B1	Defoamer (BYK)	BYK 011	1.0
C1	Wetting agent (BYK)	BYK 349	0.5
D1	Coalescent (DOW)	BUTYL CARBITOL	4.0
E1	Demi water	WATER	4.0
G1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	3.0
H1	Demi water	WATER	7.5
I1	Isocyanic crosslinker	CROSSLINKER 08 LM	10.0
Total			110.0

Solid Content ≈ 39.8%

Formulation	Gloss (20°/60°/85°)	Pencil Hardness
F4W62-2021 2k	55/81/95	F-H

Chemical and stain resistance EN 12720 - 2K - Melamin Panel

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F4W62-2021	5	3	5	5	5	5	5

Formulation	MEK 10 min	Aceton 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 6h	Water 16h
F4W62-2021	1	1	5	5	5	5	5

2K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	74.1
B1	Defoamer (Evonik)	TEGO FOAMEX 825	0.5
C1	Wetting agent (BYK)	BYK 341 (20% in BDG)	0.3
D1	Wetting agent (Evonik)	SURFINOL 104 E	0.3
E1	Wax dispersion	ADIWAX H 05CW	3.0
F1	Slip/mar agent (DOW)	DOWSIL 51	0.25
G1	Demi water	WATER	0.25
H1	Coalescent (DOW)	BUTYL DIGLYCOL	5.0
J1	Demi water	WATER	10.2
K1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	4.0
H1	Defoamer (Munzing)	AGITAN 760	0.1
L1	Silica (Evonik)	ACEMATT TS 100	1.5
M1	Wax (Micro Powder)	AQUAWAX R 214 VF	0.5
N1	Isocyanic crosslinker	CROSSLINKER 08 LM	10.0
Total			110.0





2K MATT TOP COAT

Formulation	Gloss (20°/60°/85°)	Pencil Hardness
F4W62-2021 2k	3/22/42	H

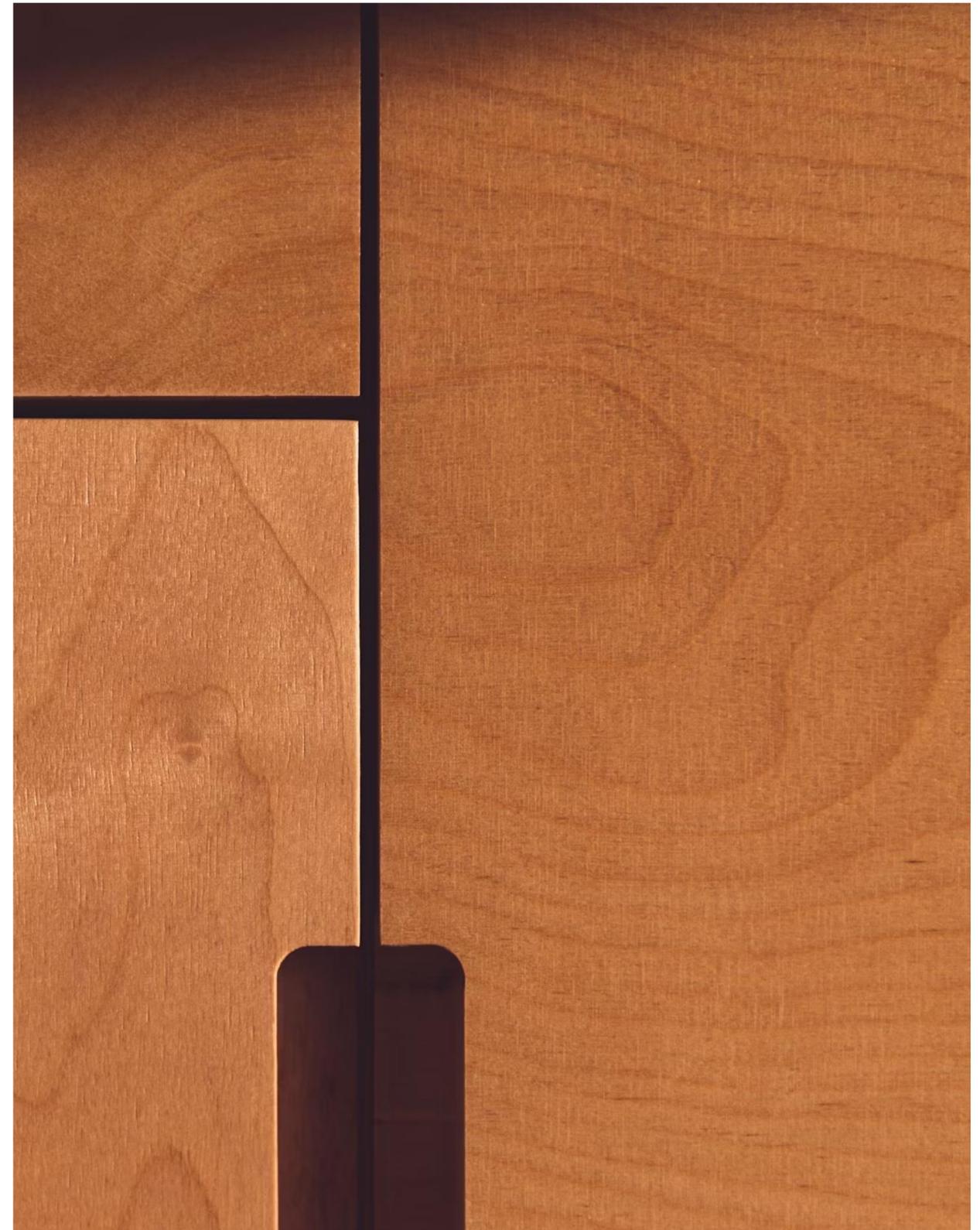
Chemical and stain resistance EN 12720 - 2K- Melammin Panel							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Mustard 1h	Shoe polish 1h
F3W62-2021	4	3	5	5	5	5	4

Formula	MEK 10 min	Aceton 10 min	Paraffin oil 1h	Olive oil 1h	Water 1h	Water 6h	Water 16h
F3W62-2021	1	1	5	5	5	5	5

2K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® AC 301	52.0
B1	Inherently matt binder	ESACOTE® PU 980	8.0
C1	Wetting agent (Munzing)	EDAPLAN 451	0.5
D1	Defoamer (BYK)	BYK 028	0.5
E1	Slip/mar agent (DOW)	DOWSIL 51	0.25
F1	Demi water	WATER	0.25
G1	Microbrads	DECOSPHAERA® 8-20	10.0
H1	Demi water	WATER	10.8
I1	Wax dispersion	ADIWAX H 05CW (30%)	3.0
K1	Defoamer (BYK)	BYK 1724	0.5
J1	Coalescent (DOW)	BUTYIL DIGLYCOL	2.0
L1	Coalescent (DOW)	DOWANOL DPM	3.0
M1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
	Rheology modifier	VISCOLAM® PS 202 AIR	1.0
Total			100.0

Solid Content ≈ 33%



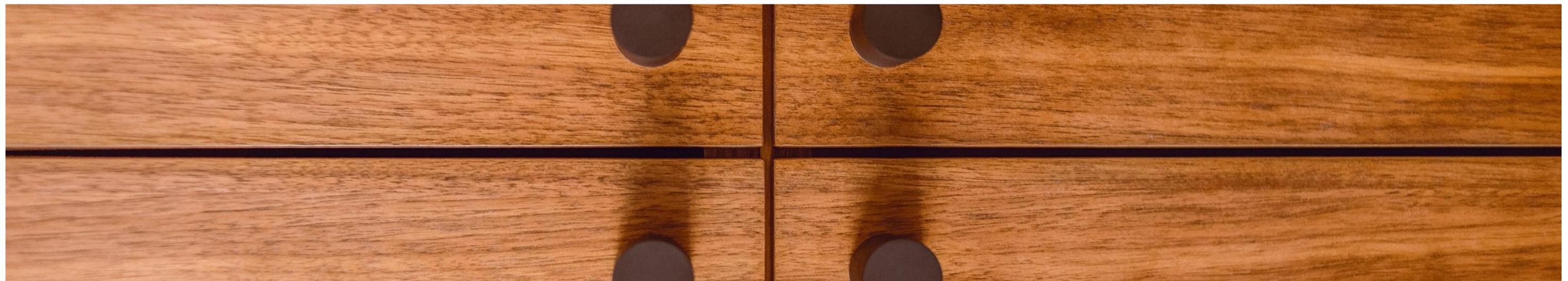


2K MATT TOP COAT

Formulation	Gloss (60°)	Pencil Hardness
F20W26-2022 2K	5	HB

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Coffee (40g/L) 6h	Coffee (40g/L) 16h
F20W6-2022 2K	3-4	3	4	5	5	5	5

Formula	MEK 10 min	Aceton 10 min	Mustard 1h	Shoe polish 1h	Water 1h	Water 6h	Water 16h
F20W6-2022 2K	3	3	5	2	5	4	4





2K MATT WHITE TOP COAT

	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

	F3W62-2021 (2K)	Trade name	% w/w
A1	Binder	ESACOTE® AC 301	74.1
B1	Defoamer (Evonik)	TEGO FOAMEX 825	0.5
C1	Wetting agent (BYK)	BYK 341 (20% in BDG)	0.3
D1	Wetting agent (Evonik)	SURFYNOL 104 E	0.3
E1	Wax dispersion	ADIWAX H05CW	3.0
F1	Slip/mar agent (DOW)	DOWSIL 51	0.25
G1	Demi water	WATER	0.25
H1	Coalescent (DOW)	BUTYL DIGLYCOL	50
J1	Demi water	WATER	10.2
K1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	4.0
L1	Defoamer (Munzing)	AGITAN 760	0.1
Total			100.0

		Trade name	% w/w
A1	Binder	F3W62-2021 1K (AC 301 based)	77.0
B1	Titanium dioxide paste	White paste 2081	20.0
C1	Silica	GASIL 800	1.5
D1	Wax (Micro Powder)	ACQUAWAX 214 VF	0.5
E1	Rheological additive	VISCOLAM® PS 170 AIR (20% diluted)	1.0
F1	Isocyanic crosslinker (Wnahua)	AQUOLIN 270	10
Total			110.0



2K MATT WHITE TOP COAT

Formulation	Gloss (20/60/85°)	Pencil Hardness
F6W62-2021-2K	6/29 / 54	H

Chemical and stain resistance EN 12720 – 2K- melammin Panel							
Formula	NH ₃ 10% - 1h	Ethanol 48% 1 / 6 / 16h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1 / 6 / 16 h	Mustard 1h	Shoe polish 1h
F6W62-2021	5	4/4/4	5	5	3-4/3-/3-	5	3

Formula	MEK 10 min	Aceton 10 min	Water 1h	Water 6h	Water 16h
F6W62-2021	1	1	5	5	5



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



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

ESACOTE® BIO 2249



- Self X-link urethaneacrylic
- Good hardness development
- Good stain and chemical resistance 1K



- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Sustainability features

ESACOTE® BIO 2249 is made with raw materials from vegetal sources, obtained from plant-derived substances.

Biobased Content calculated on product anhydrous according to EN 16785:2 : **17%**

Typical values

Visual Appearance at 25 °C:	opalescent liquid
pH at 25°C (on supplied product, ASTM E 70):	7.0-9.0
Viscosity (cPs) (on supplied product, Brookfield RVT @ 25 °C, 50 rpm spindle 2):	< 500
Solid content, %:	34.0-36.0

Product properties

Solvent content, %:	<0.35 (MEK)
Density, g/ml	1.01 - 1.05
Minimal film forming temperature, °C:	~50°C
Film aspect	tough, transparent and glossy
Koenig Hardness (s)	~140



1K RENEWABLE GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® BIO 2249	80.0
B1	Wax dispersion	ADIWAX H 30 F	2.0
C1	Coalescent (DOW)	BUTYL CARBITOL	5.0
D1	Demi water	WATER	7.3
E1	Wetting agent (BYK)	BYK 349	0.5
F1	Surface additive (BYK)	BYK 333	0.2
G1	Defoamer (Evonik)	TEGO AIREX 902 W	0.5
H1	Defoamer (BYK)	BYK 028	0.5
I1	Rheology modifier	VISCOLAM® PS BIO 202 AIR	3.0
J1	Rheology modifier	VISCOLAM® PS BIO 170 AIR (diluted 20%)	1.0
Total			100.0

Solid Content ≈ 30%
 Ford cup 4 Vx = 90"
 Renewable content on solid ≈ 19%

Gloss	20°	60°	85°
F13W03-2023 1K	44	73	81

Chemical and stain resistance EN 12720 - 1K

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee 1h (40g/L)	Coffee 6h (40g/L) 6	Coffee 16h (40g/L)
F13W03-2023 1K	2	4-5	5	5	5	3	3

Formulation	Mustard 1h	Sun cream 1 h	Ethanol 96% - 1h	Water 1h	Water 8h	Water 16h
F13W03-2023 1K	5	4-5	4	5	5	5



1K RENEWABLE MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® BIO 2249	80.0
B1	Microbeads	DECOSPHAERA® BIO 8-TR	2.0
C1	Wax dispersion	ADIWAX H 30 F	2.0
D1	Coalescent (DOW)	BUTYL CARBITOL	5.0
E1	Demi water	WATER	11.3
F1	Wetting agent (BYK)	BYK 349	0.5
G1	Surface additive (BYK)	BYK 333	0.2
H1	Slip/mar agent(DOW)	DOWSIL 56 (50% dikuted)	0.5
I1	Defoamer (BYK)	BYK 028	0.5
J1	Rheology modifier	VISCOLAM® PS BIO 202 AIR	3.0
K1	Rheology modifier	VISCOLAM® PS BIO 170 AIR (diluted 20%)	1.0
Total			100.0

Solid Content ≈ 30%
 Ford cup 4 Vx = 90"
 Renewable content on solid ≈ 19.5%

Gloss	20°	60°	85°
F14W09-2023 1K	60	30	43

Chemical and stain resistance EN 12720 - 1K

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee 1h (40g/L)	Coffee 6h (40g/L) 6	Coffee 16h (40g/L)
F14W03-2023 1K	2	4-5	5	5	5	3	3

Formulation	Mustard 1h	Sun cream 1h	Ethanol 96% - 1h	Water 1h	Water 8h	Water 16h
F14W03-2023 1K	5	5	4	5	5	5

ESACOTE® UA 7023



- Anionic self X-linking PUD
- Quick drying
- Good hardness development
- Good mechanical and chemical resistance
- Good stain resistance



- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Typical values

Appearance at 25 °C:	opalescent liquid
pH: (at 25°C on supplied product, ASTM E 70):	7.0-9.0
Viscosity (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 1)	<300
Solid content, %:	34.0-36.0

Product properties

Solvent content, %:	0%
Density, @ 25°C g/ml:	1.01-1.03
Minimal film forming temperature, °C:	~60
Koenig hardness (s)	~140
Film aspect:	hard, transparent and glossy



1K GLOSSY TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	75.0
B1	Coalescent (DOW)	BUTYL CARBITOL	8.0
C1	Demi water	WATER	12.4
D1	Wetting agent (Münzing)	EDAPLAN 451	0.5
E1	Surface additive (BYK)	BYK 333	0.1
F1	Defoamer (BYK)	BYK 1724	0.5
G1	Defoamer (BYK)	BYK 024	0.5
H1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
Total			100.0

Solid Content ≈ 28%
Vx Ford Cup 4 ≈ 25"

Gloss	20°	60°	85°
F10W03-2023 1K	79	88	97

Chemical and stain resistance EN 12720 - 1K							
Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee 1 / 16h (40g/L)	Mustard 1h	Shoe polish (kiwi) 1h
F10W03-2023 1K	2-3	4	5	5	5 / 5	5	5

Formulation	MEK 10 min	Aceton 10 min	Sun cream 1h	Betadine 1h	Cleaning solution 1h	Water 1 / 6 / 16h
F10W03-2023 1K	5	5	5	4	5	5 / 5 / 5



1K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	75.0
B1	Microbeads	DECOSPHAERA® 8-20	4.0
C1	Coalescent (DOW)	BUTYL CARBITOL	8.0
D1	Demi water	WATER	3.0
E1	Wetting agent (Münzing)	EDAPLAN 451	0.5
F1	Slip/mar agent (DOW)	DOWSIL 56 (50% diluted)	0.5
G1	Defoamer (Evonik)	TEGO AIREX 902 W	0.5
H1	Defoamer (BYK)	BYK 024	0.5
I1	Wax dispersion	ADIWAX H 05CW	3.0
J1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	3.0
Total			100.0

Solid Content ≈ 32%
Vx Ford Cup 4 ≈ 2'

Gloss	20°	60°	85°
F12W03-2023 1K	4.4	25	45

Chemical and stain resistance EN 12720 - 1K

Formulation	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee 1 / 16h (40g/L)	Mustard 1h	Shoe polish (kiwi) 1h
F12W03-2023 1K	2-3	4	5	5	5 / 5	5	5

Formulation	MEK 10 min	Aceton 10 min	Sun cream 1h	Betadine 1h	Cleaning solution 1h	Water 1 / 6 / 16h
F12W03-2023 1K	5	5	5	4	5	5 / 5 / 5



1K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	75.0
B1	Microbeads	ESACOTE® PU 980	8.0
C1	Wetting agent (Münzing)	EDAPLAN 451	0.5
D1	Defoamer (BYK)	BYK 028	0.5
E1	Slip/mar agent (DOW)	DOWSIL 56 (50% diluted)	0.5
F1	Demi water	WATER	10.8
G1	Wax dispersion	ADIWAX H 05 CW (30%)	3.0
H1	Defoamer (BYK)	BYK 1724	0.5
I1	Wetting agent (BYK)	BYK 342	0.2
J1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
K1	Demi water	WATER	6.0
L1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	1.0
Total			100.0

Solid Content ≈ 32,5%
Brookfield RVT Vx Spindle 2 - 10 rpm - 20 °C ≈ 1000 cps

Formulation	Gloss (60°)	Pencil Hardness
F17W6-2022-1K	6	HB

Chemical and stain resistance EN 12720 - 1K

Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Coffee (40g/L) 6h	Coffee (40g/L) 16h
F17W6-2022 1K	5	3	5	5	5	2	2

Formula	MEK 10 min	Aceton 10 min	Mustard 1h	Shoe polish 1h	Water 1h	Water 6h	Water 16h
F17W6-2022 1K	4	4	5	3-4	5	2	2

2K MATT TOP COAT

		Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	52.0
B1	Microbeads	ESACOTE® PU 980	8.0
C1	Wetting agent (Münzing)	EDAPLAN 451	0.5
D1	Defoamer (BYK)	BYK 028	0.5
E1	Slip/mar agent (DOW)	DOWSIL 51	0.25
F1	Demi water	WATER	0.25
G1	Microbeads	DECOSPHAERA® 8-20	10.0
H1	Demi water	WATER	10.8
I1	Wax dispersion	ADIWAX H 05 CW (30%)	3.0
J1	Defoamer (BYK)	BYK 1724	0.5
K1	Wetting agent (BYK)	BYK 342	0.2
L1	Coalescent (DOW)	BUTYL DIGLYCOL	6.0
M1	Demi water	WATER	6.0
N1	Rheology modifier	VISCOLAM® PS 170 AIR (20% diluted)	1.0
O1	Rheology modifier	VISCOLAM® PS 202 AIR	1.0
P1	Isocyanic crosslinker (Covestro)	BAHYDUR 2655 (80% in propylene carbonate)	10
Total			110.0





2K MATT TOP COAT

Formulation	Gloss (60°)	Pencil Hardness
F6W62-2021-2K	6	F-H

Chemical and stain resistance EN 12720 - 2K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic Acid 10% 1h	Ketchup 1h	Coffee (40g/L) 1h	Coffee (40g/L) 6h	Coffee (40g/L) 16h
F17W6-2022 2K	5	3	5	5	5	5	5

Formula	MEK 10 min	Aceton 10 min	Mustard 1h	Shoe polish 1h	Water 1h	Water 6h	Water 16h
F17W6-2022 2K	3-4	3-4	5	3	5	5	5



1K GLOSSY WHITE TOP COAT

	FG2A-W11-2021	Trade name	% w/w
A1	Binder	ESACOTE® UA 7023	62.6
B1	Coalescent (DOW)	BUTYL DIGLYCOL	6.3
C1	Demi water	WATER	6.1
D1	Wetting agent (Munzing)	EDAPLAN 451	0.4
D2	Slip/mar additive (DOW)	DOWSIL 51	0.2
E1	Demi water	WATER	0.2
F1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.0
G1	Defoamer (BYK)	BYK 028	0.4
H1	Titanium dioxide paste	WHITE PASTE 2081	20.0
F1	Rheology modifier	VISCOLAM® PS 170 AIR (diluted 20%)	2.2
Total			100.0

Solid Content ≈ 41%

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

	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



1K GLOSSY TOP COAT

Formulation	Gloss (20/60/85°)	Pencil Hardness
UA 7023 - FG2A -W11-2021	42 / 73 / 95	F

Chemical and stain resistance EN 12720 - 1K							
Formula	NH ₃ 10% - 1h	Ethanol 48% - 1h	Acetic A. 10% 1h	MEK 10 min	Aceton 10 min	Coffee (40g/L) 1h	Shoe polish 1h
FG2A -W11-2021	5	4-5	5	4	4	2	2++

Formula	Mustard 1h	Ketchup 1h	Cola 1h	Red Wine 1h	Lipstick 1h	Betadine (in water) 1h
FG2A -W11-2021	3	5	5	2	3	2

Polymeric matting agents

ESACOTE[®] PU, DECOSPHAERA[®] & SPHEROMERS[®]

ESACOTE® PU 960



- Inherently matt anionic PUD
- Matt appearance
- Velvet feeling
- MFFT reducer
- Tack free



- Suitable for 2K formulations
- 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):	7.00-9.00
Viscosity (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 3)	< 1500
Solid content, %:	38-40
Gloss unit, 60°:	<2

Product properties

Solvent content, %:	0
Density, @ 25°C g/ml:	1.03 – 1.05
Minimal film forming temperature, °C:	~0
Film aspect:	matt, ultra soft touch, tack free

ESACOTE® PU 980



- Inherently matt anionic PUD
- Matt appearance
- Silky feeling
- High clarity on dark substrates
- MFFT reducer
- Tack free



- Suitable for 2K formulations
- 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):	7.5-9.5
Viscosity (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 3)	600- 1100
Solid content, %:	31-33
Gloss unit, 60°:	<1

Product properties

Solvent content, % :	0
Density, @ 25°C g/ml:	1.01 – 1.05
Minimal film forming temperature, °C:	~0
Film aspect:	matt, silky touch, tack free

ESACOTE® BIO 9001



- Inherently matt anionic PUD
- Matt appearance
- Silky feeling
- High clarity on dark substrates
- MFFT reducer
- Tack free



- Suitable for 2K formulations
- Suitable for spray, brush and roller applications
- Suitable for DIY, professional and OEM applications

Sustainability features

ESACOTE® BIO 9001 is made with raw materials from vegetal sources, obtained from plant-derived substances.

Biobased Carbon content C^{14}/C_{total} according to ASTM D6866: **66 % ± 3**

Typical values

Appearance at 25 °C:	milky liquid
pH:	8.0-9.0
(at 25°C on supplied product, ASTM E 70):	
Viscosity (cPs)	600- 1000
(Brookfield RVT @ 25 °C, 50 rpm spindle 3)	
Solid content, %:	31.0-33.0
Gloss unit, 60°:	<1

Product properties

Solvent content, % :	0
Density, @ 25°C g/ml:	1.01 – 1.05
Minimal film forming temperature, °C:	~0
Film aspect:	matt, silky touch, tack free

DECOSPHAERA®



- ✓ Crosslinked PU chemistry
- ✓ Spherical shape
- ✓ Gaussian distribution
- ✓ Deep matt effect
- ✓ Natural look & no haziness
- ✓ Excellent scratch & stain resistance
- ✓ Soft & elastic touch



- ✓ Solvent free manufacturing process
- ✓ Transparent & colored grades
- ✓ Suitable for WB, SB, UV and moisture curable formulations
- ✓ Particle size (D50) from 3µm to 30µm



- ✓ Free flowing dry powder
- ✓ Dry content > 99%

SPHEROMERS®



- ✓ Crosslinked PMMA chemistry
- ✓ Spherical shape
- ✓ Monosized distribution
- ✓ Deep matt effect
- ✓ Excellent scratch & stain resistance
- ✓ Hard & dry touch



- ✓ Solvent free manufacturing process
- ✓ Transparent grades
- ✓ Suitable for WB and SB formulations
- ✓ UV formulations upon compatibility check
- ✓ Particle size (D90) from $6\mu\text{m}$ to $60\mu\text{m}$



- ✓ Free flowing dry powder
- ✓ Dry content > 99%

Rheology modifiers

VISCOLAM[®] PS

VISCOLAM[®] PS 010 AIR



- ✓ Solvent free
- ✓ VOC/SVOC free
- ✓ HEUR thickener



- ✓ Shear thinning
- ✓ High thickening efficiency
- ✓ High pigment compatibility
- ✓ Sag resistance
- ✓ Settling resistance
- ✓ Suitable for spray applications

Sustainability features

VISCOLAM[®] PS 010 AIR is made with raw materials from vegetal sources, obtained from plant-derived substances.

Biobased Content calculated on product anhydrous according to EN 16785:2 **23%**

Typical values

Appearance at 20°C: opalescent liquid

pH: 4.0 - 10.0

Viscosity (Brookfield CAP 2000, 25°C, 10 rpm): < 8.000 cPs

Dry content (120°C): > 39.5%

Co-solvent: None

APEO: free

VOC: free*

* According to Council Directive 2010/75/EU

VISCOLAM® PS 170 AIR



- ✓ Solvent free
- ✓ VOC/SVOC free
- ✓ HEUR thickener



- ✓ Medium-shear
- ✓ Good balance between thickening, levelling and gloss
- ✓ Anti-spattering properties

Sustainability features

VISCOLAM® PS 170 AIR is made with raw materials from vegetal sources, obtained from plant-derived substances.

Bio-based carbon content calculated C^{14}/C^{total} :
20%

Typical values

Appearance at 20°C: opalescent yellow liquid

pH: 4.0 - 10.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3):
max 8.000 cPs

Dry content (120°C): > 46.5%

Co-solvent: None

APEO: free

VOC: free*

* According to Council Directive 2010/75/EU



VISCOLAM[®] PS 202 AIR



- ✓ Solvent free
- ✓ VOC/SVOC free
- ✓ HEUR thickener



- ✓ Excellent film build
- ✓ Excellent flow and levelling
- ✓ High gloss
- ✓ Broad pH range

Typical values

Appearance at 20°C: opalescent liquid

pH: 4.0 - 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3):
1.000 - 6.000 cPs

Solid content: 19 - 21%



VISCOLAM[®] PS 222 AIR



- ✓ Solvent free
- ✓ VOC/SVOC free
- ✓ HEUR thickener



- ✓ Strongly newtonian
- ✓ Suitable for gloss and semi-gloss paints
- ✓ Broad pH range

Typical values

Appearance at 20°C: opalescent liquid

pH: 4.0 - 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3):
max 9.000 cPs

Solid content: 24 - 26%

**Biobased alternative
already available**



Crosslinkers

CROSSLINKER 08 LM



- Aliphatic polyisocyanate



- In compliance with Regulation (EU) 2020/1149 – Annex XVII Regulation (EC) 1907/2006 – Diisocyanates

Typical values

Appearance at 25 °C:	trasparent liquid
% NCO content on supplied product:	10.4 – 12.4
Viscosity (cPs) (Brookfield RVT @ 25 °C, 50 rpm spindle 3)	< 700
Solid content, %:	69.0-71.0
Free HDI:	<1000 ppm

Product properties

Solvent content, % :	~ 30% Propylene Carbonate
Density, @ 25°C g/ml:	~ 1.1

Waxes

Water based dispersions based on natural & synthetic waxes

ADIWAX H 05 CW



- HDPE wax
- APEO free
- High melting point



- Antiscratch
- Anti blocking
- Bright film appearance

Typical values

Aspect: Clear yellow liquid

Dry content: 35.5 ± 1%

pH: 8,5 ± 1

Density: 1 ± 0.100 g/ml

ADIWAX H 30 F



- Carnauba wax
- T1 grade purity
- APEO free



- Antiscratch
- Abrasion resistance
- Anti blocking

Typical values

Appearance at 20 °C: Brown liquid

Dry content: 30 ± 1%

pH: 5 - 7

ADIWAX HP



- Secondary emulsion based on selected paraffins
- APEO free



- Superior hydrophobicity
- Anti blocking
- Anti slip

Typical values

Aspect: White liquid

Dry content: 45 ± 1%

pH: 8.3 ± 0.5

Density: 0.950 ± 0.100 g/ml

