

CYTEC



Low VOC High solid Alkyd

for Decorative Paint

Europe, Middle East and Africa

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Total Solutions Provider

Cytec Industries is one of the world's leading specialty chemicals and materials technology companies. Our focus is on creating advanced technological solutions in global markets, including aerospace, coatings, mining, plastics and water treatment.

We are a total solutions provider with a broad range of products, including eco-friendly technologies. We support our customers worldwide with excellent technical service and applications research.

Innovative Technology

Cytec's products are innovative and diverse, and can help manufacturers realize the competitive advantages of environmental compliance, while also meeting their needs for:

- Improved performance (scratch/stain/corrosion resistance, and adhesion)
- Greater ease of application (required cure response)
- Better finishes (gloss/matte, texture, and specialty)



Broad Product Portfolio

We offer an extensive selection of performance-driven products, including low volatile organic compounds (VOC) and hazardous air pollutant substance-free (HAPS) technologies, for existing and emerging markets:

- Industrial
- Architectural/Construction
- Automotive/Transportation
- Wood/Paper
- Plastic
- Opto-electronics
- Graphic Arts
- Packaging/Adhesives

Our product portfolio is inclusive:

- UV/EB energy curable resins
- Liquid coating resins
- Waterborne
- High solids
- Solvent-borne
- Amino crosslinkers
- Powder coating resins
- Coating additives

Global Technical Support

Through our manufacturing facilities, technology and distribution centers, we are able to provide responsive service on a consistent global basis, and to help our customers identify and profit from emerging opportunities.

4 Introduction

All around the world, living in a safe and comfortable environment is very fabric of everyone's deepest wishes.

The natural strength, beauty and warmth of wood makes it the material of choice in house building. Specially designed coatings protect and enhance wooden trim, doors, floors, sidings, decks and fences.

Cytec provides a broad technology platform and technical support to enable coating producers to design high performance low VOC wood coatings, solvent & water-borne, matching the needs of both DIY'ers and contractors.



A. MAXIMUM VOC CONTENT LIMIT VALUES FOR PAINTS AND VARNISHES

	Product Subcategory	Type	Phase I (g/l ⁽¹⁾) (from 1.1.2007)	Phase II (g/l ⁽¹⁾) (from 1.1.2010)
(a)	Interior matt walls and ceilings (Gloss ≤ 25@60 °)	WB	75	30
		SB	400	30
(b)	Interior glossy walls and ceilings (Gloss > 25@60 °)	WB	150	100
		SB	400	100
(c)	Exterior walls of mineral substrate	WB	75	40
		SB	450	430
(d)	Interior/exterior trim and cladding paints for wood and metal	WB	150	130
		SB	400	300
(e)	Interior/exterior trim varnishes and woodstains, including opaque woodstains	WB	150	130
		SB	500	400
(f)	Interior and exterior minimal build woodstains	WB	150	130
		SB	700	700
(g)	Primers	WB	50	30
		SB	450	350
(h)	Binding primers	WB	50	30
		SB	750	750
(i)	One-pack performance coatings	WB	140	140
		SB	600	500
(j)	Two-pack reactive performance coatings for specific end use such as floors	WB	140	140
		SB	550	500
(k)	Multi-coloured coatings	WB	150	100
		SB	400	100
(l)	Decorative effect coatings	WB	300	200
		SB	500	200

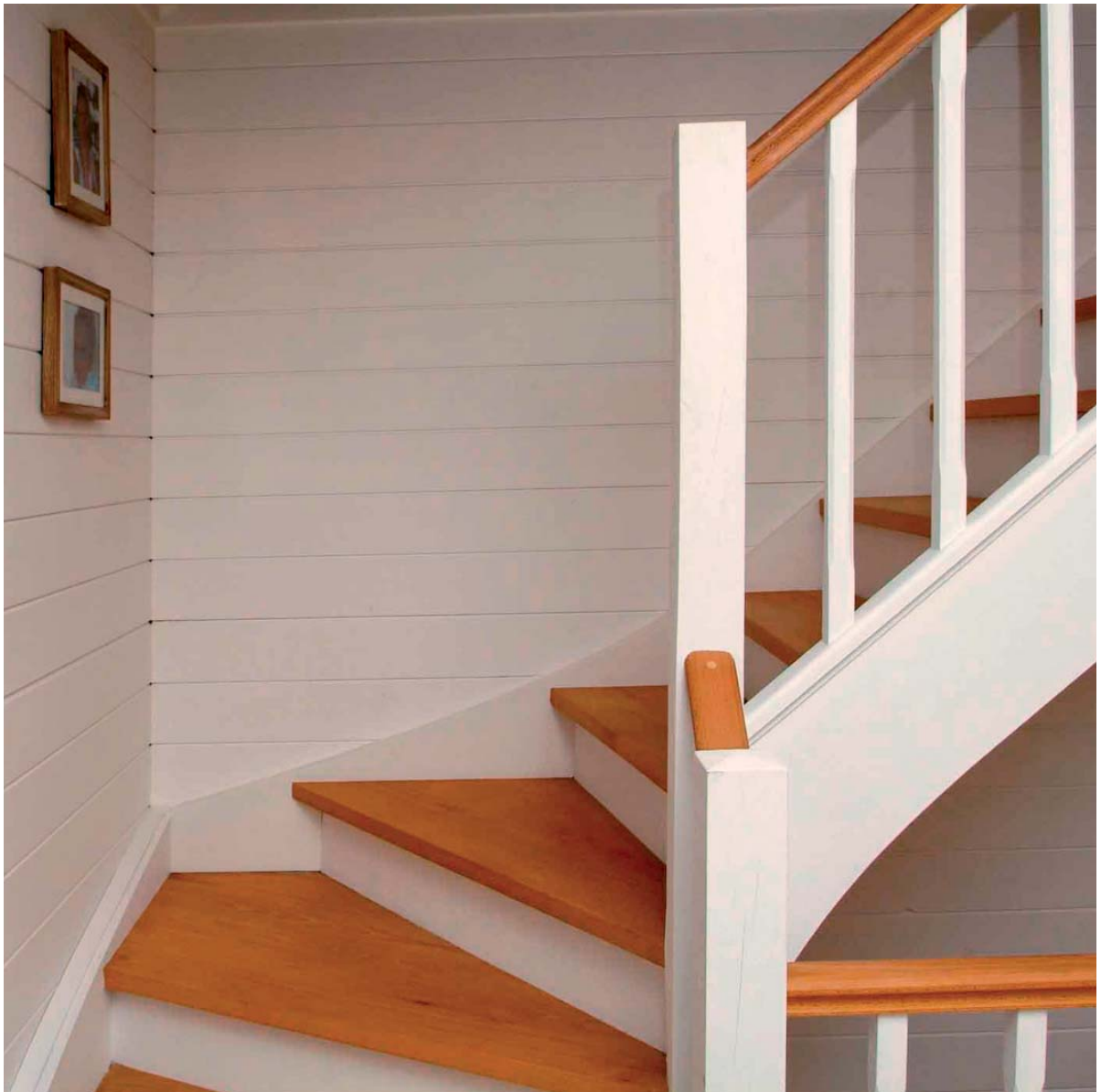
(¹) g/l ready to use.

6 Wall paints and Trim paints

Glossy alkyd paints

Formulation Reference	Composition
LH 1717	VIALKYD [®] (*) SAF 724 / 78SD60 : VIALKYD VAF 6091
RL 245 / 1a	VIALKYD AF 724 / 70SD60 : VIALKYD VAF 6091
RL 372 / 8	VIALKYD TS 354 / 70WS : VIALKYD VAF 6091

(*) : VIALKYD[®] alkyd resins



Paint formulation LH 1717

Weight percentages	Products	Description
46,55	<i>VIALKYD</i> ^(*) SAF 724 / 78SD60	
8,70	<i>VIALKYD</i> VAF 6091	
0,90	<i>Cozirk</i> ^(*) 69 HF	
0,20	<i>ADDITOL</i> ^(*) XL 297	anti skinning agent
0,20	<i>ADDITOL</i> XL 121	levelling agent
34,00	<i>Kronos</i> ^(*) 2190	
0,02	<i>Tint Ayd</i> ^(*) AL 234A	optical brightener
9,43	<i>Shellsol</i> ^(*) D 60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 880 mPa.s
Paint viscosity, ASTM D 562 / 23°C:	approx. 88 KU
Pigment / Binder:	approx. 0,76 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 8 hrs.
Trough drying, after 24 hrs., DIN 53150	3
Gloss, 20° / 60°, DIN 67530:	approx. 82 / 89
Flash point, DIN EN 22719:	approx. 62°C
Volatile organic compound (VOC):	approx. 270 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Cozirk</i>	Rhodia
<i>Kronos</i>	Kronos Titan GmbH
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

(*) : *ADDITOL* [®] Additives

Paint formulation RL 245 / 1a

	Weight percentages	Products	Description
Part 1	32,35	<i>VIALKYD</i> ^(*) AF 724/ 70 SD60	
	22,60	<i>VIALKYD</i> VAF 6091	
	5,45	<i>Shellsol</i> ^(*) D60	
Part 2	0,28	<i>Octa-Soligen</i> ^(*) Cobalt 11	
	0,85	<i>Octa-Soligen</i> Zirconium 6	
	1,20	<i>Octa-Soligen</i> Calcium 4	
	0,85	<i>ADDITOL</i> ^(*) XL 297	antiskinning agent
	0,20	<i>ADDITOL</i> XL121	levelling agent
	36,20	<i>Kronos</i> ^(*) 2190	
	0,02	<i>Tint ayd</i> ^(*) AL 234A	optical brightener
	100,00		

Production

Charge part I to pearlmill, premix and disperse for about 30 min. Then add part II and homogenise well.

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 1000 mPa.s
Paint viscosity, ASTM D 562 / 23°C:	approx. 96 KU
Pigment / Binder:	approx. 0,76 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 9 hrs.
Trough drying, after 24 hrs., DIN 53150	4
Gloss, 20° / 60°, DIN 67530:	approx. 82 / 87
Flash point, DIN EN 22719:	62°C
Volatile organic compound, (VOC):	approx. 230g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Kronos</i>	Kronos Titan GmbH
<i>Octa-Soligen</i>	Gebr. Borchers AG
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. comp.

(*) : *ADDITOL* [®] Additives - (*) : *VIALKYD* [®] alkyd resins

Paint formulation RL 372 / 8

	Weight percentages	Products	Description
Part 1	30,95	<i>VIALKYD</i> ® (*) TS 354 / 70WS	
	21,65	<i>VIALKYD</i> VAF 6091	
	5,20	<i>Shellsol</i> ® (*) D60	
Part 2	0,25	<i>Octa-Soligen</i> ® (*) Cobalt 11	
	0,80	<i>Octa-Soligen</i> Zirconium 6	
	1,15	<i>Octa-Soligen</i> Calcium 4	
	0,80	<i>ADDITOL</i> ® (*) XL 297	antiskinning agent
	0,20	<i>ADDITOL</i> XL 121	leveling agent
	34,65	<i>Kronos</i> ® (*) 2190	
	0,02	<i>Tint ayd</i> ® (*) AL 234A	optical brightener
	4,33	<i>Shellsol</i> ® D60	
	100,00		

Production

Charge part I to pearlmill, premix and disperse for about 30 min. Then add part II and homogenise well.

Paint characteristics

Paint solids:	approx. 78%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 790 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 100 KU
Pigment / Binder:	approx. 0,76 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 5 hrs.
Trough drying, after 24 hrs., DIN 53150	6
Gloss, 20° / 60°, DIN 67530:	approx. 2 / 15
Flash point, DIN EN 22719:	62°C
Volatile organic compound, (VOC):	approx. 280g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Kronos</i>	Kronos Titan GmbH
<i>Octa-Soligen</i>	Gebr. Borchers AG
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. comp.

Wall paints and Trim paints

Semi-gloss alkyd paints

Formulation Reference	Composition
AH 3815	VIALKYD [®] (*) AS 6172 / 60SD60 : VIALKYD VAF 6091
VH 32 / 1a	VIALKYD AS 584 / 45SD60 : VIALKYD VAF 6091
VH 32 / 2	VIALKYD SAF 724 / 78SD60 : VIALKYD VAF 6091

(*) : VIALKYD[®] alkyd resins



Paint formulation AH 3815

Weight percentages	Products	Description
27,70	VIALKYD ^(*) AS 6172 / 60SD60	
10,18	VIALKYD VAF 6091	
1,40	Octa-Soligen ^(*) Cobalt 1%	
1,40	Octa-Soligen Zirconium / 6%	
1,40	Octa-Soligen Calcium / 2%	
0,75	ADDITOL ^(*) XL 297	antiskinning agent
1,25	ADDITOL XL 280	antisetting agent
0,35	ADDITOL XL 121	leveling agent
26,75	Kronos ^(*) 2190	
21,30	Millicarb ^(*)	
5,20	Celite ^(*) 281	
0,02	Tint ayd ^(*) AL 234	optical brightener
2,30	Shellsol ^(*) D60	
100,00		

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 720 mPas
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 95 KU
Pigment / Binder:	approx. 2 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 7 hrs.
Trough drying, after 24 hrs., DIN 53150	6
Gloss, 20° / 60°, DIN 67530:	approx. 15 / 35
Volatile organic compound (VOC):	approx. 260 g/l

Material sources

Material	Supplier
ADDITOL additives	Cytec
VIALKYD alkyd resins	Cytec
Celite	John's Manville
Kronos	Titan GmbH
Millicarb	Omya Plüss – Staufer AG
Octa-Soligen	Gebr. Borchers AG
Shellsol	Shell chemicals
Tint-Ayd	Daniel prod. Comp., USA

(*) : **ADDITOL** [®] Additives

Paint formulation VH32 / 1a

Weight percentages	Products	Description
22,50	<i>VIALKYD</i> ^(*) AS 584 / 45SD60	
16,70	<i>VIALKYD</i> VAF 6091	
1,50	<i>Octa-Soligen</i> ^(*) Cobalt 1%	
1,20	<i>Octa-Soligen</i> Zirconium / 6%	
1,50	<i>Octa-Soligen</i> Calcium / 2%	
0,70	<i>ADDITOL</i> ^(*) XL 297	antiskinning agent
1,20	<i>ADDITOL</i> XL 280	antisetting agent
0,35	<i>ADDITOL</i> XL 121	leveling agent
42,80	<i>Kronos</i> ^(*) 2190	
10,20	<i>Millicarb</i> ^(*) OG	
0,02	<i>Tint ayd</i> ^(*) AL 234A	optical brightener
1,33	<i>Shellsol</i> ^(*) D60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 79%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 490 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 140 KU
Pigment / Binder:	approx. 2 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 5,5 hrs.
Trough drying, after 24 hrs., DIN 53150	7
Gloss, 20° / 60°, DIN 67530:	approx. 15 / 54
Flash point, DIN EN 22719:	approx. 62°C
Volatile organic compound (VOC):	approx. 270 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Kronos</i>	Kronos Titan GmbH
<i>Millicarb</i>	Omya Plüss – Staufer AG
<i>Octa-Soligen</i>	Gebr. Borchers AG
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

(*) : *ADDITOL* [®] Additives - (*) : *VIALKYD* [®] alkyd resins

Paint formulation VH32 / 2

Weight percentages	Products	Description
29,15	<i>VIALKYD</i> ^(*) SAF 724 / 78SD60	
5,45	<i>VIALKYD</i> VAF 6091	
1,50	<i>Octa-Soligen</i> ^(*) Cobalt 1%	
1,50	<i>Octa-Soligen</i> Zirconium / 6%	
1,50	<i>Octa-Soligen</i> Calcium / 2%	
0,75	<i>ADDITOL</i> ^(*) XL 297	antiskinning agent
1,25	<i>ADDITOL</i> XL 280	antisetting agent
0,35	<i>ADDITOL</i> XL 121	leveling agent
28,15	<i>Kronos</i> ^(*) 2190	
22,50	<i>Millicarb</i> ^(*) OG	
5,45	<i>Celite</i> ^(*) 281	
0,02	<i>Tint ayd</i> ^(*) AL 234A	optical brightener
2,43	<i>Shellsol</i> ^(*) D60	
100,00		

Paint characteristics

Paint solids:	approx. 83%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 1000 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 94 KU
Pigment / Binder:	approx. 2 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 6 hrs.
Trough drying, after 24 hrs., DIN 53150	6
Gloss, 20° / 60°, DIN 67530:	approx.31 / 70
Flash point, DIN EN 22719:	approx. 62°C
Volatile organic compound (VOC):	approx. 200 g/l

Material sources

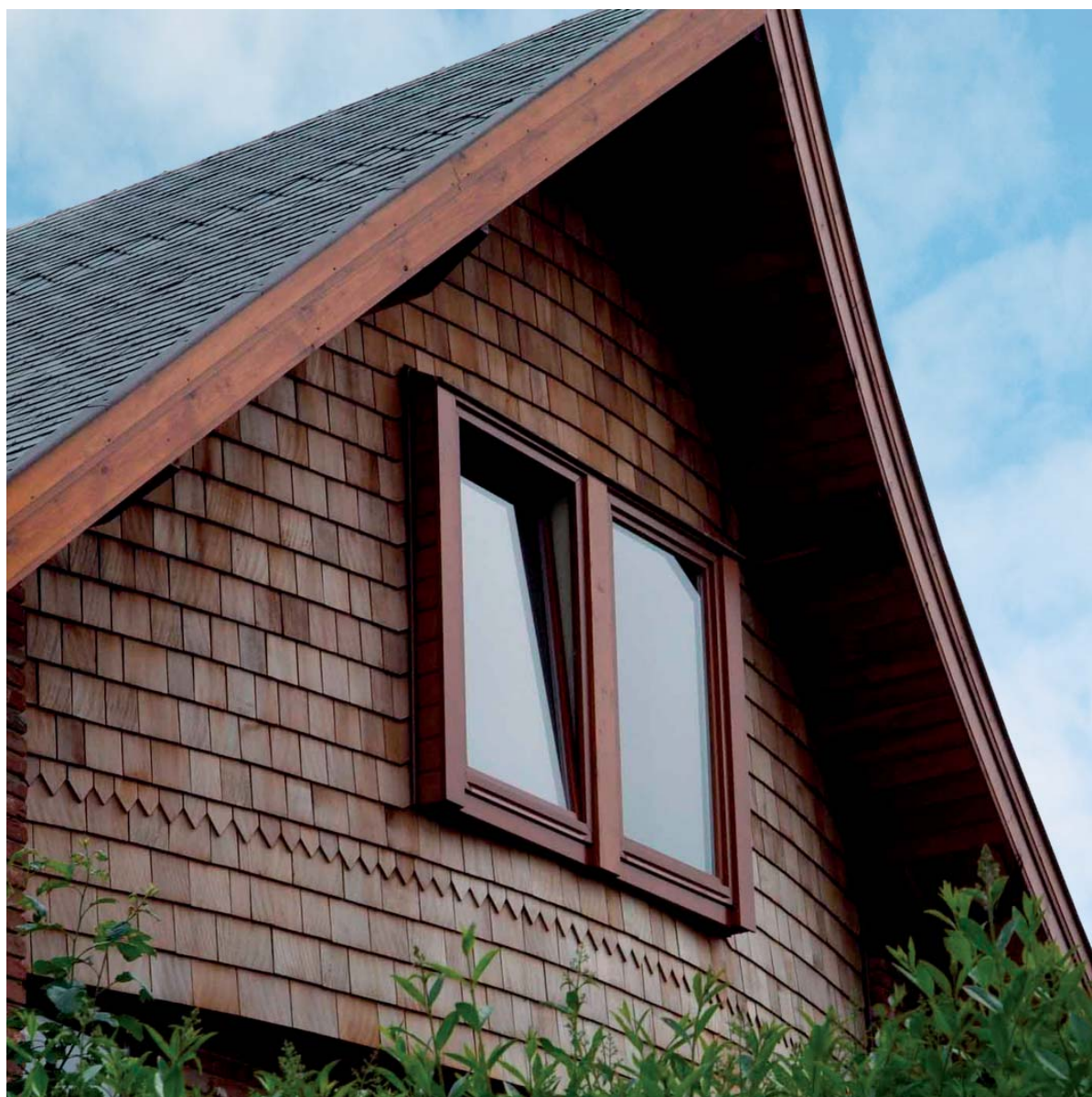
Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Celite</i>	John's Manville
<i>Kronos</i>	Titan GmbH
<i>Millicarb</i>	Omya Plüss – Staufer AG
<i>Octa-Soligen</i>	Gebr. Borchers AG
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

Wall paints and Trim paints

Mat alkyd paints

Formulation Reference	Composition
VH 32 / 1	VIALKYD [®] (*) AS 584 / 45SD60 : VIALKYD VAF 6091

(*) : VIALKYD[®] alkyd resins



Paint formulation VH32 / 1

Weight percentages	Products	Description
22,15	VIALKYD ^(*) AS 584 / 45SD60	
16,40	VIALKYD VAF 6091	
1,50	Octa-Soligen ^(*) Cobalt 1%	
1,20	Octa-Soligen Zirconium / 6%	
1,50	Octa-Soligen Calcium / 2%	
0,70	ADDITOL ^(*) XL 297	anti skinning agent
1,20	ADDITOL XL 280	anti settling agent
0,35	ADDITOL XL 121	levelling agent
26,10	Kronos ^(*) 2190	
20,95	Millicarb ^(*) OG	
5,05	Celite ^(*) 281	
0,02	Tint Ayd ^(*) AL 234A	optical brightener
2,88	Shellsol ^(*) D 60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 79%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 470 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 118 KU
Pigment / Binder:	approx. 2 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 5 hrs.
Trough drying, after 24 hrs., DIN 53150	7
Gloss, 20° / 60°, DIN 67530:	approx. 3 / 20
Flash point, DIN EN 22719:	approx. 62°C
Volatile organic compound (VOC):	approx. 270 g/l

Material sources

Material	Supplier
ADDITOL additives	Cytec
VIALKYD alkyd resins	Cytec
Celite	John's Manville
Kronos	Titan GmbH
Millicarb	Omya Plüss – Staufer AG
Octa-Soligen	Gebr. Borchers AG
Shellsol	Shell chemicals
Tint-Ayd	Daniel prod. Comp., USA

(*) : **ADDITOL** [®] Additives - (*) : **VIALKYD** [®] alkyd resins

Wall paints and Trim paints

Thixotropic alkyd paints

Formulation Reference	Composition
HW353 / 2	VIALKYD [®] (*) SAF 724 : VIALKYD VAF 6091 : VIALKYD AS 6140sca
HW353 / 3	VIALKYD SAF 724 : VIALKYD VAF 6091 : VIALKYD AS 633tix
HW353 / 8	VIALKYD SAF 724 : VIALKYD VAF 6091 : VIALKYD VAS 6105sca
HW353 / 9	VIALKYD SAF 724 : VIALKYD VAF 6091 : VIALKYD VAS 6106sca

(*) : VIALKYD[®] alkyd resins

Paint formulation HW353 / 2

Weight percentages	Products	Description
22,4	VIALKYD [®] (*) AS 6140sca / 49 SD60	
0,4	Propylene glycol	
18,0	VIALKYD SAF 724 / 78 SD60	
20,0	VIALKYD VAF 6091	
0,9	Cozirk [®] (*) 69 HF	
0,2	ADDITOL [®] (*) XL 297	anti skinning agent
0,2	ADDITOL XL 121	slip and levelling agent
35,0	Kronos [®] (*) 2190	
0,02	Tint Ayd [®] (*) AL 234A	optical brightener
2,88	Shellsol [®] (*) D 60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 380 mPas
ASTM D 562 / 23°C :	approx. 71 KU
Gloss 20° / 60°, DIN 67530:	approx. 79 / 87
Tack-free time, 152 µm applicator:	approx. 4,5hrs
Trough drying, after 24 hrs., DIN 53150	4
Sagging	300 µm
Flash point, DIN EN 22 719:	approx. 62°C
Volatile organic compound (VOC):	approx. 250 g/l

Paint formulation HW353 / 3

Weight percentages	Products	Description
18,0	<i>VIALKYD</i> ^(*) SAF 724 / 78 SD60	
20,0	<i>VIALKYD</i> VAF 6091	
22,0	<i>VIALKYD</i> AS 533tix / 50SD60	
0,9	<i>Cozirk</i> ^(*) 69 HF	
0,2	<i>ADDITOL</i> ^(*) XL 297	anti skinning agent
0,2	<i>ADDITOL</i> XL 121	slip and levelling agent
35,0	<i>Kronos</i> ^(*) 2190	
0,02	<i>Tint Ayd</i> ^(*) AL 234A	optical brightener
2,88	<i>Shellsol</i> ^(*) D 60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 540 mPas
ASTM D 562 / 23°C:	approx. 82 KU
Gloss 20° / 60°, DIN 67530:	approx. 80 / 88
Tack-free time, 152 µm applicator:	approx. 4 hrs
Trough drying, after 24 hrs., DIN 53150	4
Sagging	> 300 µm
Flash point, DIN EN 22 719:	approx. 62°C
Volatile organic compound (VOC):	approx. 250 g/l

Material sources (HW353 / 2 & 3)

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Cozirk</i>	Rhone Poulenc Chemicals LTD
<i>Kronos</i>	Titan GmbH
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

(*) : *ADDITOL* ^(*) Additives - (*) : *VIALKYD* ^(*) alkyd resins

Wall paints and Trim paints

Thixotropic glossy alkyd paints

Paint formulation HW353 / 8

Weight percentages	Products	Description
21,60	<i>VIALKYD</i> ^(*) VAS 6105sca / 50SD60	
0,30	<i>Propylene glycol</i>	
26,30	<i>VIALKYD</i> SAF 724 / 78SD60	
19,30	<i>VIALKYD</i> VAF 6091	
0,80	<i>Cozirk</i> ^(*) 69 HF	
0,20	<i>ADDITOL</i> ^(*) XL 297	anti skinning agent
0,18	<i>ADDITOL</i> XL 121	levelling agent
27,00	<i>Kronos</i> ^(*) 2190	
0,02	<i>Tint Ayd</i> ^(*) AL 234A	optical brightener
4,30	<i>Shellsol</i> ^(*) D60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 78%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 550 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 110 KU
Pigment / Binder:	approx. 0,76 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 6,5 hrs.
Trough drying, after 24 hrs., DIN 53150	4
Sagging	150 µm
Gloss, 20° / 60°, DIN 67530:	approx. 70 / 80
Flash point, DIN EN 22719:	approx. 62°C
Volatile organic compound (VOC)	approx. 290 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Cozirk</i>	Rhone Poulenc Chemicals LTD
<i>Kronos</i>	Titan GmbH
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

Paint formulation HW353 / 9

Weight percentages	Products	Description
18,70	<i>VIALKYD</i> ^(*) VAS 6106sca / 60SD60	
0,30	<i>Propylene glycol</i>	
27,30	<i>VIALKYD</i> SAF 724 / 78SD60	
20,05	<i>VIALKYD</i> VAF 6091	
0,90	<i>Cozirk</i> ^(*) 69 HF	
0,20	<i>ADDITOL</i> ^(*) XL 297	anti skinning agent
0,18	<i>ADDITOL</i> XL 121	levelling agent
28,10	<i>Kronos</i> ^(*) 2190	
0,02	<i>Tint Ayd</i> ^(*) AL 234A	optical brightener
4,23	<i>Shellsol</i> ^(*) D60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 78%
Paint viscosity, DIN ASTM D 4287-88, shear rate D: 10 000 s ⁻¹ / 23°C	approx. 510 mPa.s
Paint viscosity, ASTM D 562 / 23°C (KU):	approx. 96 KU
Pigment / Binder:	approx. 0,76 : 1
Tackfree time, 152 µm applicator, room temp.:	approx. 7 hrs.
Trough drying, after 24 hrs., DIN 53150	3
Sagging	150 µm
Gloss, 20° / 60°, DIN 67530:	approx. 80 / 86
Flash point, DIN EN 22719:	approx. 62 °C
Volatile organic compound (VOC):	approx. 250 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Cozirk</i>	Rhone Poulenc Chemicals LTD
<i>Kronos</i>	Titan GmbH
<i>Shellsol</i>	Shell chemicals
<i>Tint-Ayd</i>	Daniel prod. Comp., USA

(*) : *ADDITOL* [®] Additives - (*) : *VIALKYD* [®] alkyd resins

Stains and varnish

Transparent woodstains

Formulation Reference	Composition
LH1475 / 1	VIALKYD [®] (*) AS 754h / 80SD60
LH1781	VIALKYD SAF 724 / VIALKYD 78SD60 : VIALKYD VAF 6091

Paint formulation LH 1475 / 1

Weight percentages	Products	Description
74,0	VIALKYD [®] (*) AS 754h / 80SD60	
2,9	Octa Soligen [®] (*) Cobalt 1%	
2,1	Octa Soligen Zirconium / 6%	
2,9	Octa Soligen Calcium / 2%	
1,2	ADDITOL [®] (*) XL 297	antiskinning agent
15,0	Sicoflush - L gelb [®] (*) 1916	
1,9	Shellsol [®] (*) D60	
100,00		

Paint characteristics

Paint solids:	approx. 65%
Paint viscosity, ASTM D 4287-88, 10 000 s-1/23 °C:	approx. 850 mPas
ASTM D 562 / 23 °C:	approx. 95 KU
Pigment / binder:	approx. 0,1 / 1
Gloss 20° / 60°, DIN 67530:	approx. - / 9
Tack-free time, 76 µm applicator:	approx. 8 hrs.
Trough drying, after 24 hrs., DIN 53150	4
Flash point, DIN EN 22 719:	approx. 62°C
Volatile organic compound (VOC):	approx. 400 g/l

Material sources

Material	Supplier
ADDITOL additives	Cytec
VIALKYD alkyd resins	Cytec
Octa Soligen	Borchers GmbH
Shellsol	Shell chemicals
Sicoflush - L gelb	BASF / Ludwigshafen

For exterior applications light stabilisers like a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 292 (approx. 0,5% on paint) or a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 123 (approx. 0,5% on paint) should be used.

(*) : ADDITOL[®] Additives - (*) : VIALKYD[®] alkyd resins

Paint formulation LH 1781

Weight percentages	Products	Description
50,75	<i>VIALKYD</i> ^(*) SAF 724 / 78SD60	
16,25	<i>VIALKYD</i> VAF 6091	
0,25	<i>Octa Soligen</i> ^(*) Cobalt 11 %	
1,15	<i>Octa Soligen</i> Zirconium / 6 %	
1,05	<i>Octa Soligen</i> Calcium / 2 %	
1,40	<i>ADDITOL</i> ^(*) XL 297	antiskinning agent
6,65	<i>Disperfin</i> ^(*) 653 LH ROT	
22,50	<i>Shellsol</i> ^(*) D60	
100,00		

Paint characteristics

Paint solids:	approx. 61%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 140 mPas
ASTM D 562 / 23°C:	approx. 48 KU
Pigment / binder:	approx. 0,12 / 1
Tack-free time, 76 µm applicator:	approx. 4,5 hrs.
Trough drying, after 24 hrs., DIN 53150	4
Flash point, DIN EN 22 719:	approx. 39°C
Volatile organic compound (VOC):	approx. 400 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Disperfin</i>	Brockhues AG
<i>Octa Soligen</i>	Borchers GmbH
<i>Shellsol</i>	Shell chemicals

For exterior applications light stabilisers like a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 292 (approx. 0,5% on paint) or a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 123 (approx. 0,5% on paint) should be used.

(*) : *ADDITOL* [®] Additives - (*) : *VIALKYD* [®] alkyd resins

Formulation Reference	Composition
HW353 / 4	VIALKYD ^{®(*)} TO 167 / 60IRH : VIALKYD VAF 6091
HW353 / 4a	VIALKYD TO 608 / 55SD60 : VIALKYD VAF 6091

Paint formulation HW 353 / 4

Weight percentages	Products	Description
29,90	VIALKYD ^{®(*)} TO 167 / 60IRH	
23,30	VIALKYD VAF 6091	
0,30	Octa Soligen ^{®(*)} Cobalt 11%	
0,40	Octa Soligen Zink / 8%	
0,30	ADDITOL ^{®(*)} XL 297	antiskinning agent
0,30	ADDITOL XL 121	slip and leveling agent
0,20	Borchigen ^{®(*)} ND	dispersing agent
40,40	Kronos ^{®(*)} 2190	
0,02	Tint Ayd ^{®(*)} AL 234A	optical brightener
4,88	Shellsol ^{®(*)} D60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 850 mPas
ASTM D 562 / 23°C :	approx. 82 KU
Gloss 20° / 60°, DIN 67530:	approx. 21 / 88
Tack-free time, 152 µm applicator:	approx. 4,5 hrs
Trough drying, after 24 hrs., DIN 53150	4
Volatile organic compound (VOC):	approx. 240 g/l

Material sources

Material	Supplier
ADDITOL additives	Cytec
VIALKYD alkyd resins	Cytec
Kronos	Titan GmbH
Octa Soligen	Borchers GmbH
Shellsol	Shell chemicals
Tint-Ayd	Daniel prod. Comp., USA

(*) : ADDITOL[®] Additives - (*) : VIALKYD[®] alkyd resins

Paint formulation HW 353 / 4a

Weight percentages	Products	Description
32,60	VIALKYD ^(*) TO 608 / 55SD60	
23,30	VIALKYD VAF 6091	
0,30	Octa Soligen ^(*) Cobalt 11%	
0,40	Octa Soligen Zink / 8%	
0,30	ADDITOL ^(*) XL 297	antiskinning agent
0,30	ADDITOL XL 121	slip and leveling agent
0,18	Borchigen ^(*) ND	dispersing agent
40,40	Kronos ^(*) 2190	
0,02	Tint Ayd ^(*) AL 234A	optical brightener
2,20	Shellsol ^(*) D60	
100,00		

Production

Premix in mentioned order, than disperse about 30 min. in pearlmill.

Paint characteristics

Paint solids:	approx. 80%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 550 mPas
ASTM D 562 / 23°C:	approx. 82 KU
Gloss 20° / 60°, DIN 67530:	approx. 81 / 89
Tack-free time, 152 µm applicator:	approx. 4 hrs
Trough drying, after 24 hrs., DIN 53150	4
Flash point, DIN EN 22 719	approx.
Volatile organic compound (VOC):	approx. 240 g/l

Material sources

Material	Supplier
ADDITOL additives	Cytec
VIALKYD alkyd resins	Cytec
Borchigen	Titan GmbH
Kronos	Gebr. Borchers AG
Octa Soligen	Borchers GmbH
Shellsol	Shell chemicals
Tint-Ayd	Daniel prod. Comp., USA

(*) : **ADDITOL** [®] Additives - (*) : **VIALKYD** [®] alkyd resins

Stains and varnish

Trim varnish

Formulation Reference	Composition
<i>HW353 / 1</i>	<i>VIALKYD</i> ® (*) TO 608 / 55SD60 : <i>VIALKYD</i> VAF 6091
<i>HW353 / 5</i>	<i>VIALKYD</i> TO 167 60IRH : <i>VIALKYD</i> VAF 6091

(*) : *ADDITOL*® Additives - (*) : *VIALKYD*® alkyd resins



Paint formulation HW 353 / 1

Weight percentages	Products	Description
22,3	<i>VIALKYD</i> ^{®(*)} VAF 6091	
70,2	<i>VIALKYD</i> TO 608 / 55 Shellsol ^{®*} D 60	
0,3	<i>Octa Soligen</i> ^{®(*)} Cobalt 11%	
0,5	<i>Octa Soligen</i> Zink / 8%	
0,4	<i>ADDITOL</i> ^{®(*)} XL 297	antiskinning agent
0,4	<i>ADDITOL</i> XL 121	slip and leveling agent
5,9	<i>Shellsol</i> ^{®(*)} D60	
100,00		

Paint characteristics

Paint solids:	approx. 60%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 240 mPas
ASTM D 562 / 23 °C:	approx. 51 KU
Tack-free time, 76 µm applicator:	approx. 3,5 hrs
Trough drying, after 24 hrs., DIN 53150	3
Volatile organic compound (VOC):	approx. 390 g/l

Paint formulation HW 353 / 5

Weight percentages	Products	Description
22,3	<i>VIALKYD</i> ^{®(*)} VAF 6091	
70,2	<i>VIALKYD</i> TO 608 / 55 Shellsol ^{®*} D 60	
0,3	<i>Octa Soligen</i> ^{®(*)} Cobalt 11%	
0,5	<i>Octa Soligen</i> Zink / 8%	
0,4	<i>ADDITOL</i> ^{®(*)} XL 297	antiskinning agent
0,4	<i>ADDITOL</i> XL 121	slip and leveling agent
5,9	<i>Shellsol</i> ^{®(*)} D60	
100,00		

Paint characteristics

Paint solids:	approx. 60%
Paint viscosity, ASTM D 4287-88, 10 000 s ⁻¹ /23 °C:	approx. 240 mPas
ASTM D 562 / 23°C:	approx. 51 KU
Tack-free time, 76 µm applicator:	approx. 3,5 hrs
Trough drying, after 24 hrs., DIN 53150	3
Volatile organic compound (VOC):	approx. 390 g/l

Material sources

Material	Supplier
<i>ADDITOL</i> additives	Cytec
<i>VIALKYD</i> alkyd resins	Cytec
<i>Octa Soligen</i>	Borchers GmbH
<i>Shellsol</i>	Shell chemicals

For exterior applications light stabilisers like a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 292 (approx. 0,5% on paint) or a combination of Tinuvin 400 (approx. 1% on paint) and Tinuvin 123 (approx. 0,5% on paint) should be used.

Products	Dilution	Type	Resin composition approx.	Dynamique viscosity (High-shear) ASTM D 4287	Flash point DIN EN ISO 1523 approx.
VIALKYD[®] AF 724	70 SD60	Long oil, air-drying alkyd resin, low viscosity	68% special selectefatty acids (as triglycerides) 23% phthalic anhydride	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 2200 - 3800	64°C
VIALKYD AS 584	45 SD60	Medium oil, drying alkyd resin, free of aromatic hydrocarbons, soya oil type	55% oil, 30% phthalic anhydride	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 1500 - 4000	62°C
VIALKYD AS 754H	80 SD60	long oil drying alkyd, based on isophthalic acid soya oil type	75% oil , 19% isophthalic acid	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 7000 - 12000	62°C
VIALKYD SA F724	78 SD60	Long oil, drying alkyd resin, low viscosity	72% mainly fatty acids, rich in linoleic acid 22% phthalic anhydride	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 5000 - 8000	64°C
VIALKYD AS 6172	60 SD60	Medium oil, drying alkyd resin, free of aromatic hydrocarbons, soya oil type	57% oil 29% phthalic anhydride	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 9000 - 12000	62°C
VIALKYD TS 354	70 WS	Medium oil, air -drying silicone alkyd resin	47% oil 30% polysiloxane	Dynamic viscosity (100 1/s; 23°C) 50% WS [mPa.s] 65 - 190	30°C
VIALKYD TO 167	60 IRH	Oil-modified, air-drying polyurethane resin soya oil type	68% oil	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 2200 - 3200	55°C
VIALKYD TO 608	55 SD60	Oil-modified, air-drying polyurethane resin soya oil type	62% oil 15% phthalic anhydride	Dynamic viscosity (100 1/s; 23°C) 45% SD60 [mPa.s] 280 - 560	47°C
VIALKYD AS 533tix	50 SD60	Thixotropic alkyd resin with high gel strength soya oil type	53% oil 27% phthalic anhydride	Rheological properties (f.o.d.) highly thixotropic	60°C
VIALKYD AS 6140sca	49 SD60	Thixotropic, air-drying, long-oil alkyd resin soya oil type	60% oil	Dynamic viscosity (10000 1/s; 23°C) [mPa.s] 160 - 320	62°C
VIALKYD VAS 6105sca	50 SD60	Thixotropic, air-drying, long-oil alkyd resin soya oil type	58% oil	Dynamic viscosity (10000 1/s; 23°C) [mPa.s] 150 - 300	62°C
VIALKYD VAS 6106sca	60 SD60	Thixotropic, air-drying, long-oil alkyd resin soya oil type	58% oil	Dynamic viscosity (500 1/s; 23°C) 50% SD60 [mPa.s] 500 - 1500	63°C
VIALKYD VAF 6091	100%	Long oil, air drying High Solids alkyd resin	89% vegetable fatty acids (as triglycerides)	Dynamic viscosity (25 1/s; 23°C) [mPa.s] 450 - 800	130°C

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