



Industrial coating

Clear coat for furniture, water-based

preferably as base and intermediate coat

fast drying, good sandability and blocking resistance

good resistance to chemicals and water

Basis Acrylic dispersion (core-shell), self cross-linkable

I 13401.1		[2]	[3]	[5]	[6]
Alberdingk AC 25381	(1)	74.50	74.50	74.50	74.50
Tego Foamex 822	(2)	0.60	0.60	0.60	0.60
Dowanol DPM	(3)	5.00	5.00	5.00	5.00
Dowanol DPnB	(3)	2.00	2.00	2.00	2.00
Deionized water		6.00	6.00	8.00	7.60
SILLITIN Z 89	(4)	10.00	---	20.00	---
SILLITIN V 88	(4)	---	10.00	---	20.00
Aquacer 539	(5)	3.00	3.00	3.00	3.00
Byk-346	(5)	0.30	0.30	0.30	0.30
Rheovis PU 1214 NC	(6)	0.15	0.15	0.15	0.15
Total parts by weight		101.55	101.55	113.55	113.15

Recommendation

- [2] good storage stability, good “enlivening” effect on bright wood, good water resistance
- [3] high transparency, especially for dark wood
- [5] good storage stability, fast and good sandability
- [6] fast drying, fast and good sandability, matting

Mixing

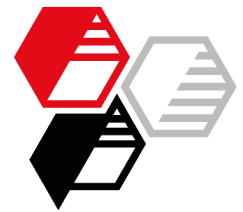
- charge Alberdingk AC 25381 and add Tego Foamex
- premix and add Dowanol DPM, Dowanol DPnB and water
- add filler and disperse by dissolver (15 min, 4.2 m/s)
- complete by remaining additives

Technical Data

Solids content (w/w)	%	46.4	46.4	50.3	50.5
PVC	%	10.6	10.6	19.1	19.1



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Properties	Fineness of grind, DIN EN ISO 1524	µm	5	5	5	5	
	Dynamic viscosity, 23°C	at 0.1 s ⁻¹	Pa·s	1.55	1.26	1.95	1.40
		at 1000 s ⁻¹	Pa·s	0.17	0.17	0.16	0.18
	Storage stability, 23°C	28 d	all: very good, no gelling				
	Sedimentation stability		very good	good *	very good	moderate	
* <i>sedimentation stability and redispersibility can be improved by adding Laponite RD (0.2 pbw, Rockwood Additives)</i>							
The following properties were determined on knife-coated films:							
Drying time, based on ASTM D 5895							
Film applicator equipped with wire loop tool (Erichsen)							
Dry film thickness (DFT)	35 µm	min	24	23	20	17	
	75 µm	min	45	42	42	39	
Gloss 60°, DFT 35 µm, DIN EN ISO 2813	GU	42	23	15	8		
comparable results at DFT 70 µm							
Transparency, DFT 35 µm							
Increase of L* over black substrate		1.7	1.0	3.0	2.1		
Pendulum hardness Koenig, DFT 30							
	after 1 d	s	36	39	43	45	
	after 7 d	s	57	59	66	64	
	after 21 d	s	70	69	74	69	
Cross-cut test 1 mm, DIN EN ISO 2409							
after 7 d, on wood, after tape tear-off		0	0	0	0		
Sandability (manually tested)							
Drying time for sufficient sandability		good	good	very	very		
DFT 35 µm	h	24	24	6	6		
comparable results at DFT 65 µm							
Abrasion loss CS 17, ASTM D 4060 (1000 g, per 500 revolutions)							
after 26 d, DFT 65 µm		mm ³	70	65	75	68	



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Blocking resistance on Leneta foil				
<i>Rating: 10 = not sticky, 0 = 75-100 % tear-off</i>				
Conditioning 24 h indoor climate, DFT 35 µm				
Loading: 100 g/cm ² for 1 h, 23°C	8	8	9	9
Loading: 100 g/cm ² for 1 h, 40°C	7	7	7	7-8
Conditioning 30 min 23°C + 30 min convection oven 40°C, DFT 65 µm				
Loading: 100 g/cm ² for 1 h, 23°C	7	7-8	7-8	7-8
Chemical resistance, DIN EN 12720, stain resistance on beech				
after 10 d drying, DFT 90 µm (3 x 30 µm)				
<i>Rating: 5 = no visible change, 1 = clear marking</i>				
deionized water 16 h	5	5	5	3
acetic acid 10 % 16 h	3-4	3-4	3-4	3
ethanol 48 % 1 h	5	4	4	3
ammonia 10 % 2 min	5	5	5	5
soluble coffee 16 h	4	4	3	3
cola 16 h	5	5	5	4
red wine 6 h	5	5	3	3
mustard 6 h	5	5	4-5	4
ink 16 h	3-4	3-4	2	2-3
hand cream „Nivea“ 16 h	4-5	4-5	4-5	4-5
butter 16 h	4-5	4-5	4-5	4-5

Suppliers

- (1) Alberdingk Boley
- (2) Evonik Tego Chemie
- (3) Dow Chemical Company
- (4) HOFFMANN MINERAL
- (5) Byk Chemie
- (6) BASF

More information on this topic:

[Neuburg Siliceous Earth in Water-based Acrylic Clear Coats for Wood](#)

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