



Industrial coating
2K PU Topcoat for plastics
Partial replacement of titanium dioxide

Basis Polyurethane

			Control	SILFIT Z 91		AKTIFIT PF 111	
				-10 % TiO ₂	-20 % TiO ₂	-20 % TiO ₂	-30 % TiO ₂
				TiO ₂ replacement by weight		by volume	
I 24403.1			[49]	[50]	[51]	[60]	[61]
Component A	-- part 1 --						
	Desmophen 680 BA	(1)	35.38	35.38	35.38	35.38	35.38
	Borchi Gol OL 31	(2)	0.73	0.73	0.73	0.73	0.76
	Byk-141	(3)	0.37	0.37	0.37	0.37	0.37
	Tinuvin 292 50% in xylene	(4)	0.73	0.73	0.73	0.73	0.73
	Dabco 33 LV 10 % in butyl acetate	(5)	3.71	3.71	3.71	3.71	3.71
	Bentone 38 10 % swelling)**		2.60	2.60	2.60	2.60	2.60
	Disperbyk-118	(3)	0.74	0.74	0.74	0.74	0.66
	Aerosil R972	(5)	0.18	0.18	0.18	---	---
	Titanium dioxide		29.60	26.64	23.68	23.68	20.72
	SILFIT Z 91	(6)	---	2.96	5.92	---	---
	AKTIFIT PF 111	(6)	---	---	---	5.92	5.63
	-- part 2 --						
	Methoxy propyl acetate / Butyl acetate (1:1)		14.39	14.39	14.39	14.39	14.39
Component B							
	Desmodur ultra N 3390 BA	(1)	9.83	9.83	9.83	9.83	9.83
	Methoxy propyl acetate		1.74	1.74	1.74	1.74	1.74
	Total parts by weight		100.00	100.00	100.00	99.82	96.49

)** 10 % Bentone swelling

Bentone 38 10.0 (7)

Anti-Terra-U 5.0 (3)

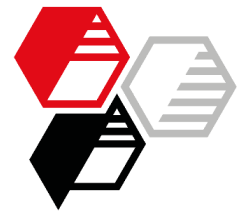
Solvent Naphta 100 85.0

prepare by stirring

Recommendation SILFIT Z 91 and AKTIFIT PF 111

- very high brightness and color neutrality
- high contrast ratio
- very high gloss
- very low haze
- cost reduction potential

In addition, when using AKTIFIT PF 111, the use of hydrophobic, fumed silica for rheology control can be dispensed with, thus avoiding its negative effect on gloss and haze as well as simplifying handling.



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Technical Data	NCO / OH ratio		all 1:1				
Properties	Dynamic viscosity @ 23 °C, after 28 d						
	0.1 s ⁻¹	Pa·s	0.24	0.23	0.24	0.20	0.20
	100 s ⁻¹	Pa·s	0.13	0.13	0.14	0.13	0.12
	Pendulum hardness, DFT 120 µm after 8 weeks drying time	s	81	81	82	81	78
	Color CIELab d/8° L*	-	97.6	97.4	97.0	97.1	97.0
	Color CIELab d/8° a*	-	-0.5	-0.5	-0.5	-0.4	-0.5
	Color CIELab d/8° b*	-	2.3	2.2	2.1	2.2	2.1
	Contrast ratio, DFT 70 µm	%	98.9	98.7	98.6	98.7	98.3
	Gloss 60°	GU	95	95	93	95	95
	Haze	-	28	34	44	35	34
Mixing	<ul style="list-style-type: none"> - prepare part 1 by dissolver with adapted bead mill (10 min at 4.7 m/s) - complete with part 2 - premix raw materials from component B - mix component A and B shortly before application 						
Suppliers	<ol style="list-style-type: none"> (1) Covestro (2) Borchers (3) Byk Chemie (4) BASF (5) Evonik Industries (6) HOFFMANN MINERAL (7) Elementis 						

More information on this topic:

[Partial Titanium Dioxide Replacement by Neuburg Siliceous Earth in 2C PU Top Coat White](#)

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