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Industrial coating 2K Hydro soft feel lacquer, transparent Bayhydrol U 2757//UH 340/1 and Desmodur ultra N 3600//Bayhydur ultra 2655

Basis Polyurethane

			Control (standard matting)	AKTIFIT PF 115
	L 00005.1		[34]	[32]
Component A	Bayhydrol U 2757	(1)	30.5	30.5
	Bayhydrol UH 340/1	(1)	39.7	39.7
	Demineralized water		9.8	9.8
	Lucrafoam DNE 01	(2)	0.2	0.2
	Byk-348	(3)	0.6	0.6
	Tego-Wet KL 245, 50 % in water	(4)	0.4	0.4
	Aquacer 513	(3)	1.6	1.6
	Decosoft 7 transparent D	(5)	7.4	5.0
	AKTIFIT PF 115	(6)		11.2
	Acematt 3300	(7)	3.0	2.0
Component B	Desmodur ultra N 3600 / Bayhydur ultra 2655 (70:30), 75 % in 1-methoxy-2-propylacetate	(1)	6.8	6.8
Dilution	with demineralized water to a flow time of ≈ 30 s (5 mm flow cup, DIN EN ISO 2431)		2.1	3.6
	Total parts by weight		102.1	111.4

Benefits with AKTIFIT PF 115 for partial replacement of the usual matting agents

- optical properties and resistance to various substances are largely retained
- slightly improved adhesion, even after testing resistance to suntan lotion
- cost reduction potential up to 20 %

Note

The guide formulation contains the maximum possible filler dosage of 11.2 parts AKTIFIT PF 115. However, for highest optical level requirements, the dosage can be reduced to 5 to 8 parts.



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Mixing

- charge all raw materials of component A except Acematt 3300
- Component A disperse with glass beads on the Skandex shaker to a grain fineness <10 µm
 - stir in Acematt 3300 afterwards

Application

- mix with component B and dilute with water to a spray viscosity of ≈ 30 s flow time (5 mm flow cup, DIN EN ISO 2431)
- by air spray gun (nozzle 1.2 mm and 2.1 bar pressure)
- substrate: Bayblend T65 XF (PC+ABS blend)
- flash-off time 10 min, then 30 min @ 80 °C and 4 h @ 60 °C
- storing before tests: 7 days @ standard climate 23/50
- dry film thickness ≈ 50 µm

			Control (standard matting)	AKTIFIT PF 115		
			[34]	[32]		
Properties	on black Bayblend T65 XF sheets, ≈ 50 µm dry film thickness					
	Gloss 60°	GU	1.5	1.6		
	Gloss 85°	GU	5.0	7.4		
	Color d/8° L*		25.4	27.0		
	Color d/8° b*		-1.2	-1.9		
	Cross-cut test 2 mm		3	1-2		

More information on this topic (including resistance testing and costs):

Neuburg Siliceous Earth in Softfeel-Lacquers

Suppliers

- (1) Covestro
- (2) Levaco
- (3) Byk Chemie
- (4) Evonik Tego Chemie
- (5) Microchem
- (6) HOFFMANN MINERAL
- (7) Evonik Industries

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