



Industrial coating
UV clear coat for Excimer curing

Basis Polyester / Urethane acrylate; Polyester acrylate

Guide formulations of BASF	RRS 2214	Matting silica		SILLITIN V 88		AKTISIL MAM	
		A	B	A	B	A	B
Polyester unsaturated	¹⁾ (1)	55.0	---	55.0	---	55.0	---
Urethane acrylate highly functional	¹⁾ (1)	22.0	---	22.0	---	22.0	---
Polyester acrylate flexible	¹⁾ (1)	---	40.0	---	40.0	---	40.0
Polyester acrylate highly functional	¹⁾ (1)	---	37.0	---	37.0	---	37.0
Silica gel matting silica	(2)	5.0	---	---	---	---	---
SILLITIN V 88	(3)	---	---	5.0	---	---	---
AKTISIL MAM	(3)	---	---	---	---	5.0	---
Reactive diluent difunctional	¹⁾ (1)	16.4	---	16.4	---	16.4	---
Photoinitiator MAPO liquid	^{1) 2)} (4)	0.3	---	0.3	---	0.3	---
Photoinitiator HCPK	^{1) 3)} (4)	0.5	---	0.5	---	0.5	---
Defoamer	¹⁾ (1)	0.3	---	0.3	---	0.3	---
Leveling agent	¹⁾ (1)	0.5	---	0.5	---	0.5	---
Total % by weight		100.0	100.0	100.0	100.0	100.0	100.0

- ¹⁾ please ask manufacturer for the exact type
- ²⁾ Ethyl phenyl (2,4,6-trimethylbenzoyl) phosphinate
- ³⁾ 1-Hydroxycyclohexylphenylketone

Benefits with SILLITIN V 88 and AKTISIL MAM

- low viscosity of the liquid lacquer
- consistently strong matting
- no polish-up (burnishing) after scratch test Martindale
- potential for cost reduction of matting agent up to 80 %

Preparation & application

The tests were carried out at BASF.

Curing

Pre-gelling: 10 m/min Ga 100 W/cm
 Excimer: 10 m/min 2 lamps
 Post curing: 10 m/min Ga + HG 100 W/cm



	RRS 2214	Matting silica		SILLITIN V 88		AKTISIL MAM	
		A	B	A	B	A	B
Viscosity	mPa·s	1600	1840	1260	1480	1220	1480
Gloss 60°	GU	3.1	2.9	3.0	3.2	3.3	3.2
Gloss 85°	GU	20.7	28.2	15.5	19.5	15.7	22.4
Scratch test Martindale, method A							
Change in gloss 60°	Δ GU	-1.1	-0.6	-1.3	-1.7	-1.5	-1.6
Change in gloss 85°	Δ GU	8.0	9.7	6.2	5.8	5.7	1.1

Suppliers

- (1) BASF
- (2) various; d50: 6 µm, oil absorption 320 g/100g, BET 400 m²/g
- (3) HOFFMANN MINERAL
- (4) iGM Resins

More information on this topic:

[Neuburg Siliceous Earth in UV clear coat – Excimer curing constant matting with unique filler](#)

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