CALCINED NEUBURG SILICEOUS EARTH
PARTIAL TITANIUM DIOXIDE REPLACEMENT
2 C PU TOP COAT WHITE

FORMULATION

			Control
Component A	Desmophen 680 BA	Polyesterpolyol	35.38
	Borchi Gol OL 31	Surface additive	0.73
	Byk 141	Defoamer	0.37
	Tinuvin 292 (50% in Xylene)	Light stabilizer	0.73
	Dabco 33-LV (10% in Butyl acetate)	Catalyst	3.71
	Bentone 38 (10% in Solvent Naphta 100 : Anti Terra U = 85:5)	Rheology additive	2.60
	Disperbyk 118	Dispersing agent	0.74
	Aerosil R 972	Rheology additive, hydrophobic, fumed silica	0.18
	Titanium dioxide	Pigment, rutile	29.60
	Methoxypropylacetate / Butyl acetate 1:1	Solvent	14.39
Comp. B	Desmodur ultra N 3390 BA	Polyisocyanate	9.83
	Methoxypropylacetate	Solvent	1.74
Total			**100.00 %**

OBJECTIVE

Partial Titanium Dioxide Replacement by
Calcined Neuburg Siliceous Earth

	equal weight			equal volume
	- 10 % TiO_2	- 20 % TiO_2		- 30 % TiO_2
			without hydrophobic silica	
Disperbyk 118*	0.74	0.74	0.74	0.66
Aerosil R 972	0.18	0.18	---	---
Titanium dioxide	26.64	23.68	23.68	20.72
Silfit Z 91	2.96	5.92	---	---
Aktifit PF 111	---	---	5.92	5.63
Total	**100.00**	**100.00**	**99.82**	**96.49**

Component A: Grinding in bead mill with glass beads for 10 min at 4,7 m/s
* 2.5 % Dispersing agent on pigment and filler
Dry film thicknes ~ 120 µm

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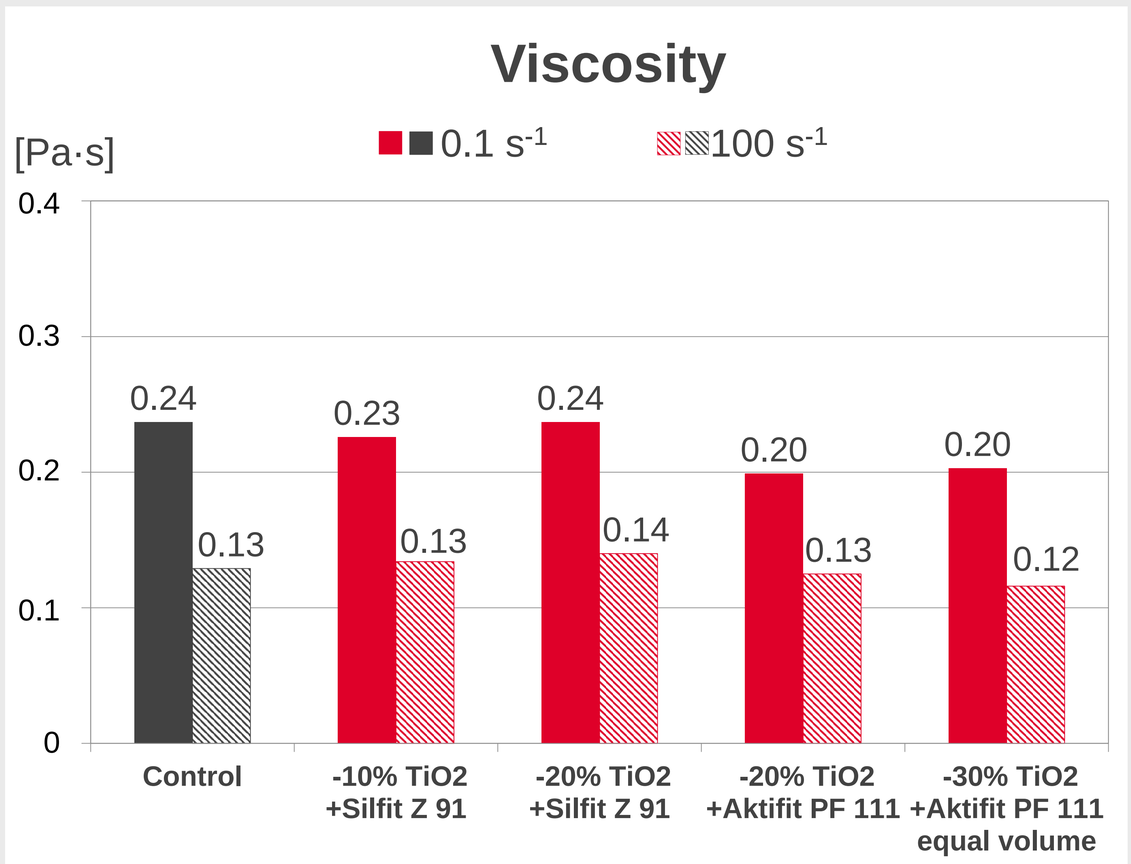
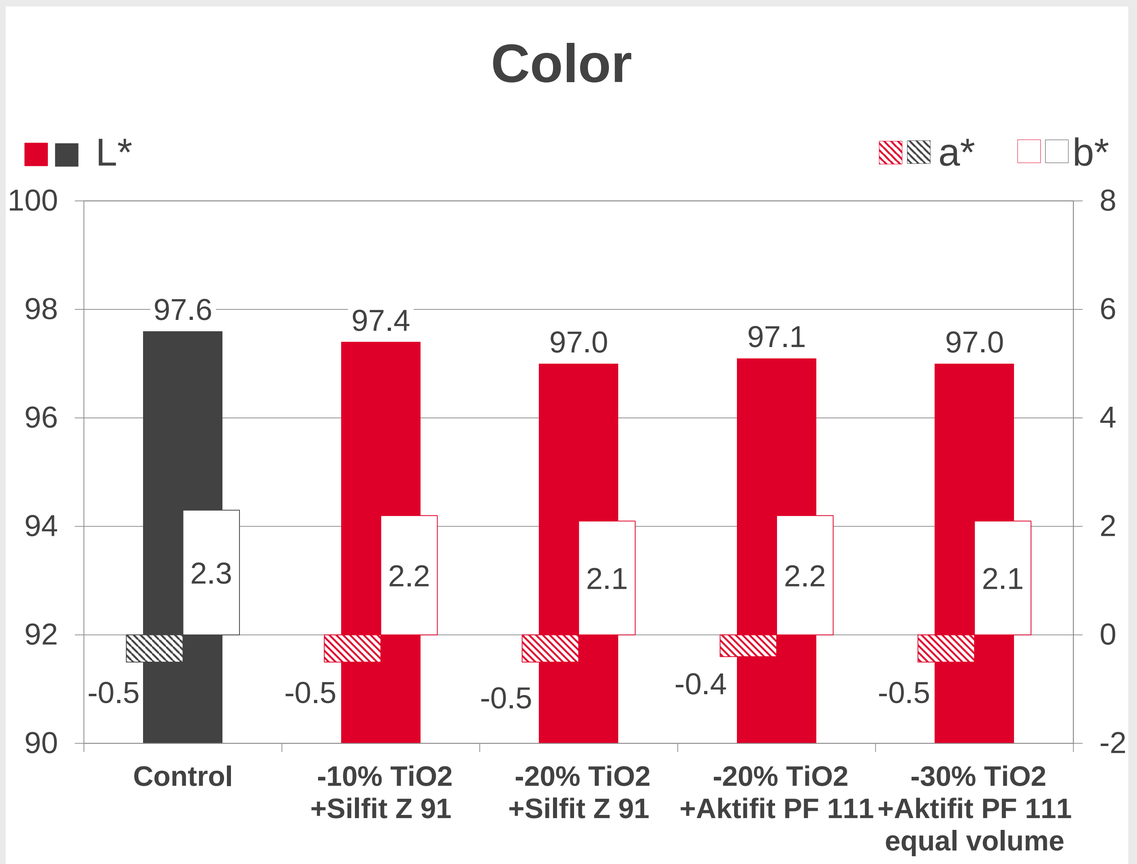
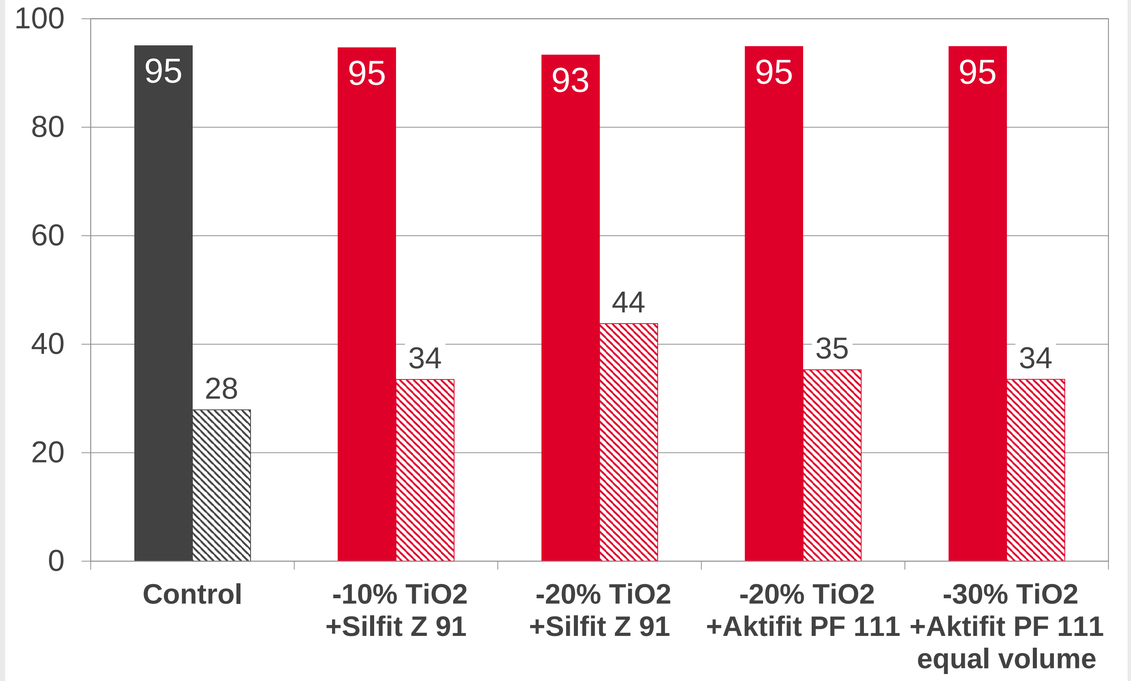
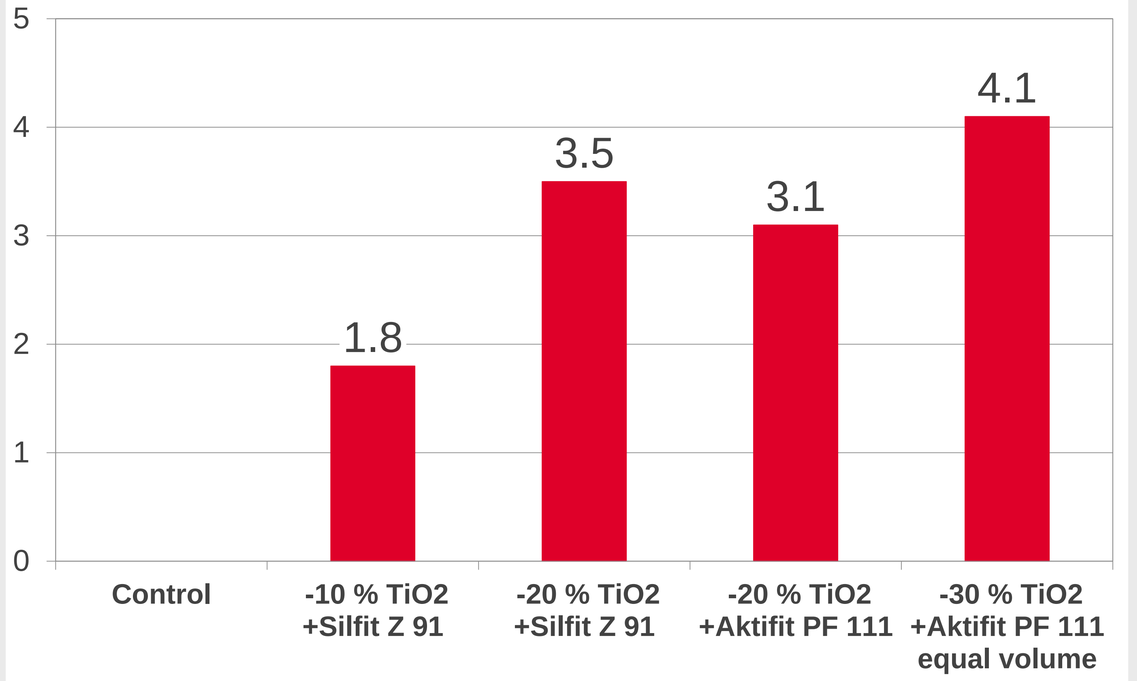
RESULTS









SUMMARY

Silfit Z 91

Aktifit PF 111

Retained Features:

- ✓ High contrast ratio (DFT 70µm all over 98%)
- ✓ Very high brightness and color neutrality
- ✓ Very high gloss and very low haze

Improved Features:

+ **Cost reduction potential**

+ 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.

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