NEUBURG SILICEOUS EARTH IN ROAD MARKING PAINT WHITE, WATER-BASED (WFT < 300µm)

OBJECTIVE

How can Sillitin Z 89 and Silfit Z 91 Reduce Titanium Dioxide?

FORMULATION

	Control *	- 20 % TiO_2		- 30 % TiO_2		
Fastrack 53	366	366	366	366	366	366	366
Foamaster 8034	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Triton X 405	2.9	2.9	2.9	2.9	2.9	2.9	2.9
AS 238	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Titanium dioxide	96	77	77	77	67	67	67
Natural calcium carbonate (NCC)	456	469	342	342	475	342	342
Sillitin Z 89			122			128	
Silfit Z 91				122			128
Ethanol	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Foamaster 8034	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Texanol	38	38	38	38	38	38	38
Water	18.1	18.1	18.1	18.1	18.1	18.1	18.1
Total (parts per weight)	**1000**	**994**	**989**	**989**	**990**	**985**	**985**
PVC [%]	51						
Dilution [%] [1]	0	0	4.0	2.3	0	3.8	2.1

[1] Dilution with deionized water [%] to application viscosity of approx. 15 s in the DIN 6 mm cup

*** Base formulation by Dow Chemical Company (Rohm & Haas)**

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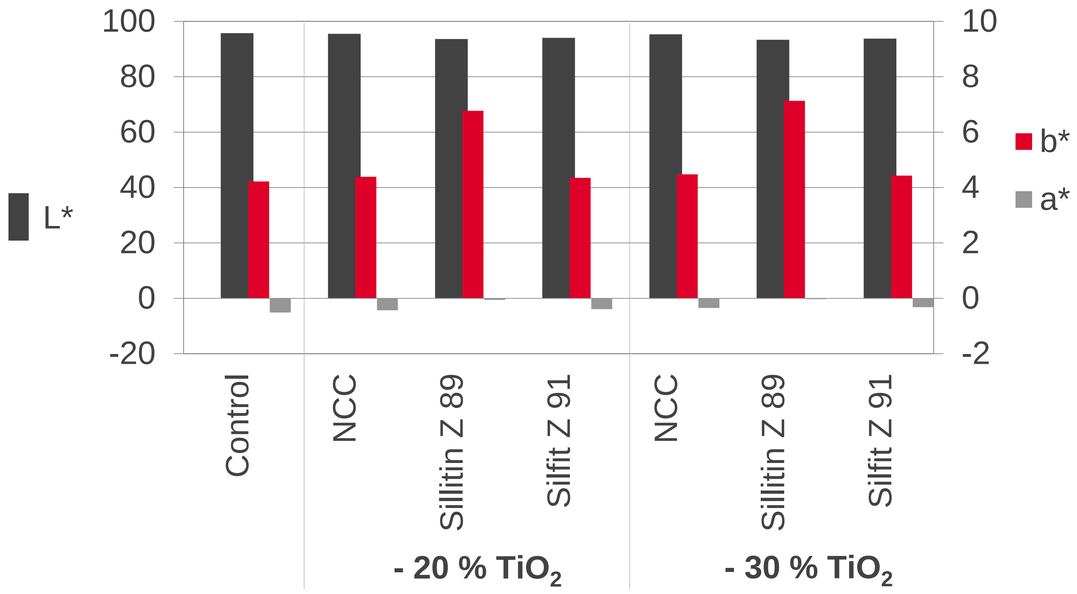
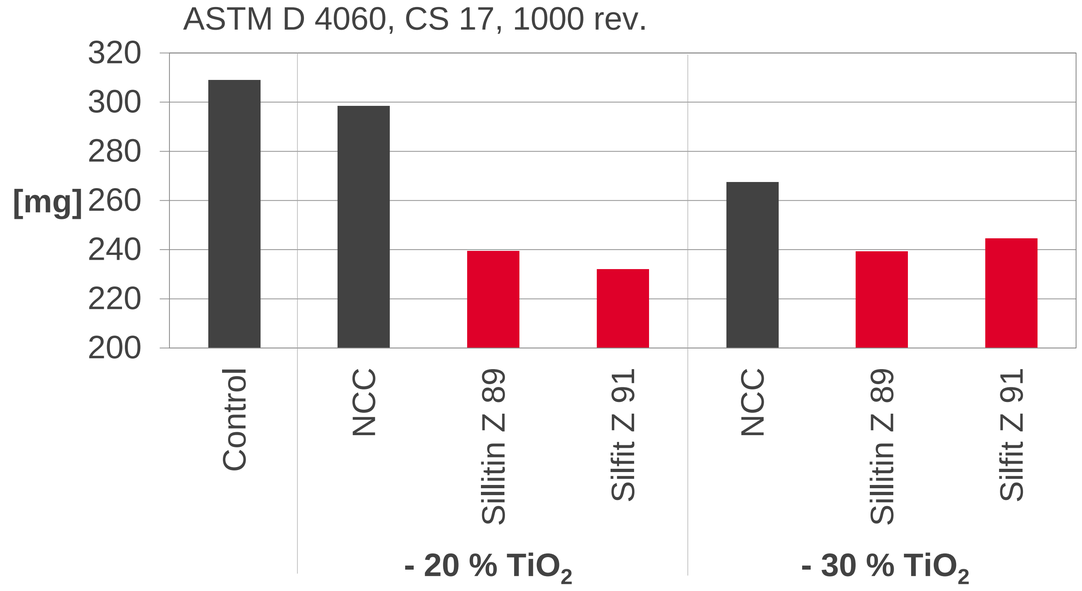
RESULTS

Color 45°/0° (DFT ~ 260µm)



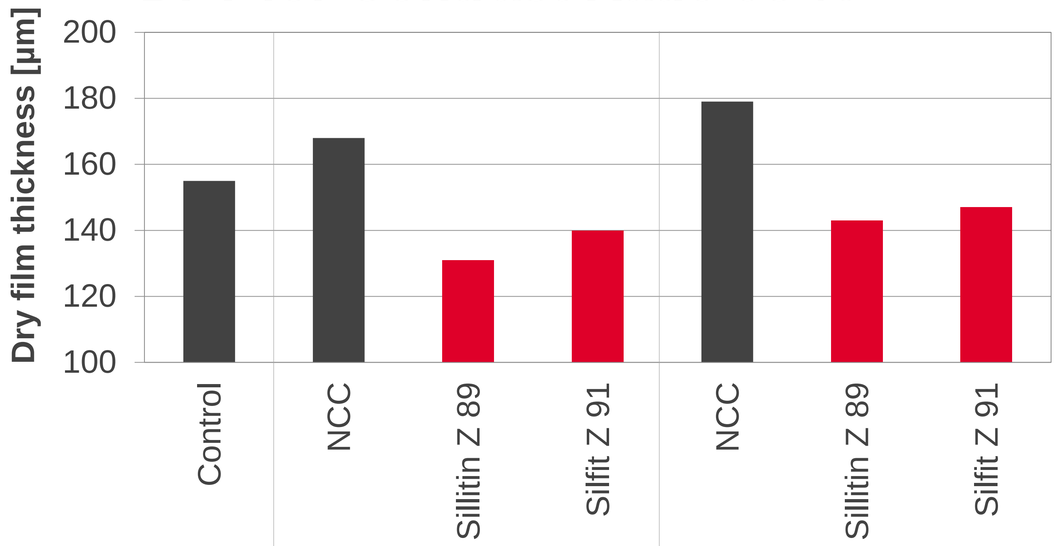
Abrasion Loss

ASTM D 4060, CS 17, 1000 rev.



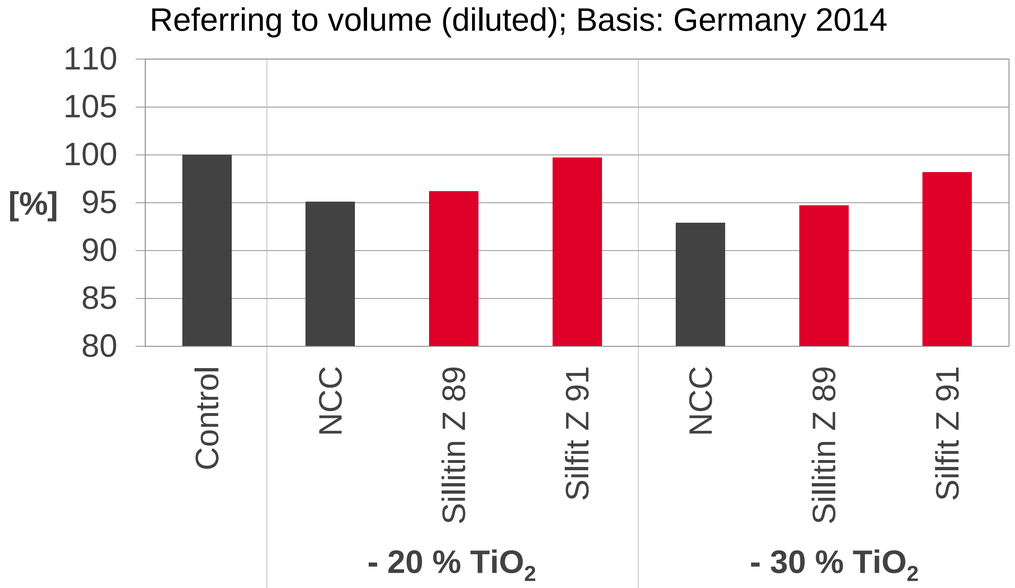
Water Wash-off Resistance (Early Rain Resistance)

DFT for Contrast Ratio 98 %



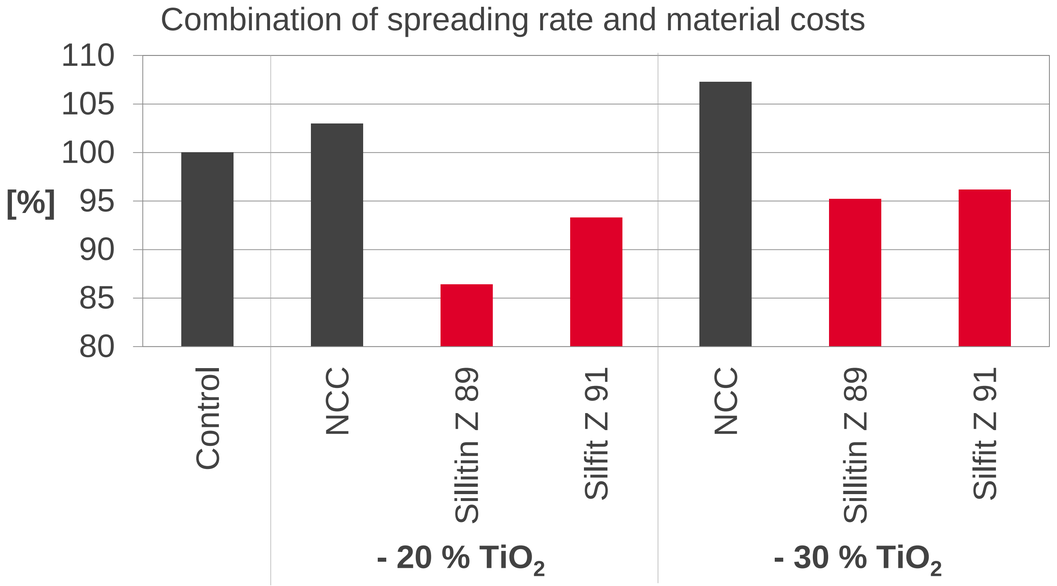
Raw Material Cost Index

Referring to volume (diluted); Basis: Germany 2014



Overall System Costs

Combination of spreading rate and material costs



SUMMARY

The use of **Neuburg Siliceous Earth** gives rise to the following effects:

- maintained color space
- improved water wash-off resistance (early rain resistance)
- marked improvement of the abrasion resistance
- dramatic improvement of the hiding power, which could allow a notable reduction of the titanium dioxide
- offers cost-saving potential