


# NEUBURG SILICEOUS EARTH IN ARCHITECTURAL INTERIOR EMULSION PAINT

VAE / PVC 71 % / TiO<sub>2</sub> 19 %

TiO<sub>2</sub> Extension: Silfit Z 91 vs. PCC / Combinations

## FORMULATION

* Base formulation by Celanese Emulsions		Control*	TiO <sub>2</sub> Extender varied			
			Full TiO <sub>2</sub>	- 10 % TiO <sub>2</sub>	- 20 % TiO <sub>2</sub>	- 20 % TiO <sub>2</sub>
Water deionized		291				
Additives		19				
TiO <sub>2</sub>		185	185	166	148	
PCC	0.3 µm	70	70	70	70	70
<b>Silfit Z 91</b>			<b>70</b>	<b>70</b>	<b>57</b>	<b>74</b>
GCC	2 µm	125				
	5 µm	90				
	10 µm	30				
Mica/Quartz/ Chlorite	5 µm	40				
Mowilith LDM 1871		150				
Total parts by weight		1000				
Solids content w/w [%]		63.0				



## RETAINED FEATURES

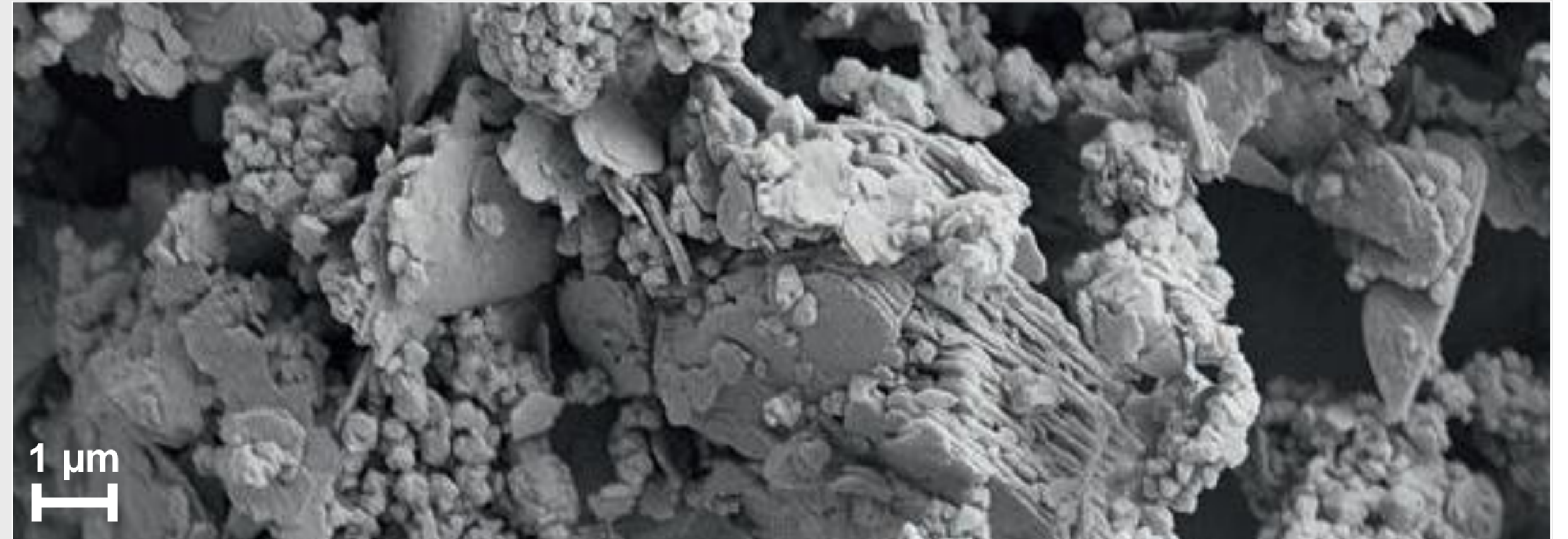
Without significant difference or minor effects:

- Preparation  
Dissolver equipped with toothed disc (Cowles blade)  
Dispersing 15 m/s for 20 min, water cooling, T max. 60°C
- Viscosity  
at low shear 0.1 s<sup>-1</sup> 102 – 138 Pa\*s  
at high shear 1000 s<sup>-1</sup> 0.36 – 0.45 Pa\*s (Searle, 23°C)
- Storage stability  
no phase separation; settling or sediment (after 6 months, 23°C)
- Color
- Low gloss
- Wet-scrub resistance  
Dry film thickness loss < 5 µm per 200 cycles / ISO 11998  
Class 1 DIN EN 13300
- Paint compliant to EU Ecolabel requirements for spreading rate & limits for white pigments

## COST / PERFORMANCE

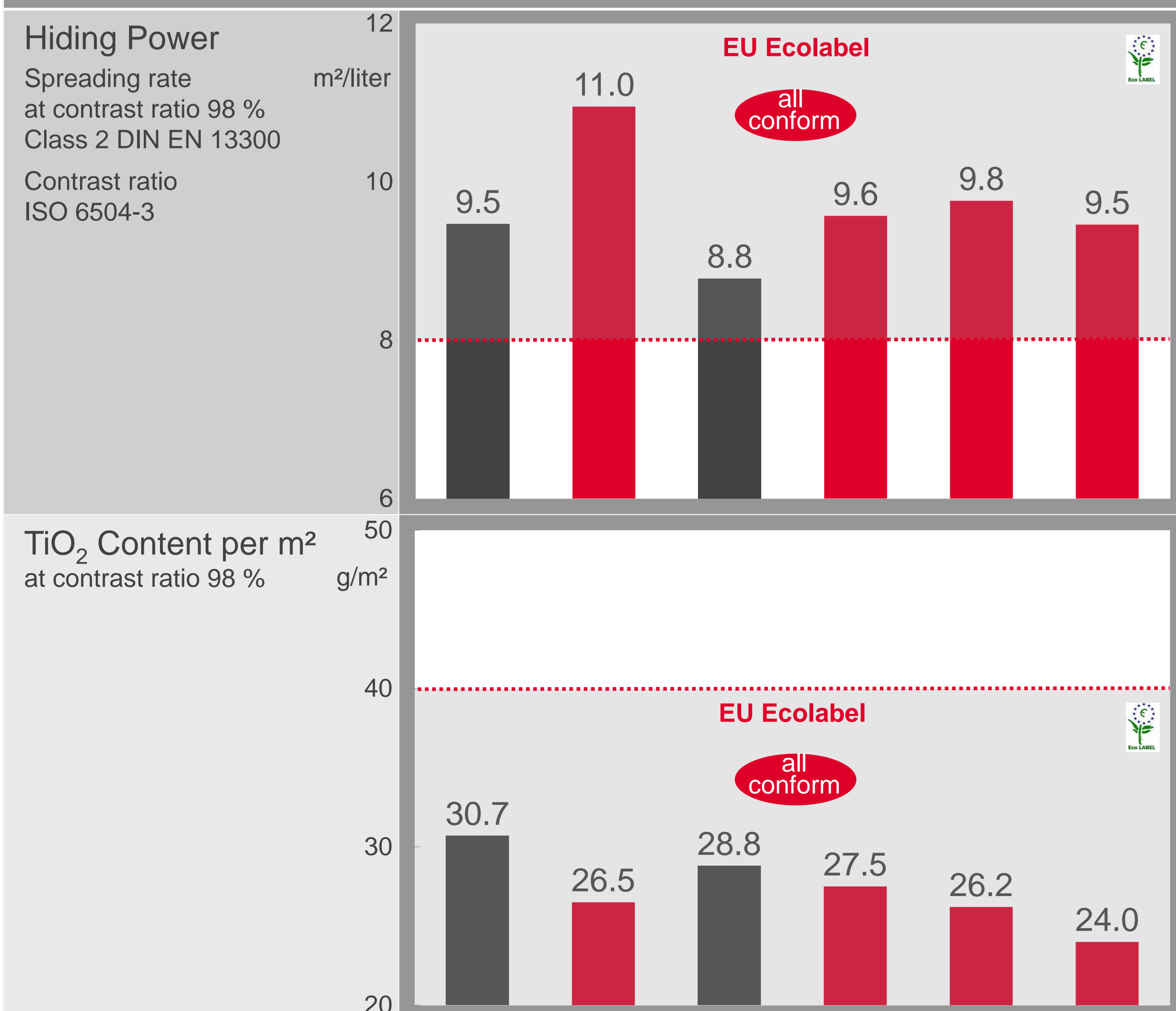
Germany 2019 at contrast ratio 98 %

	Change vs. Control [%]	+ 15.7	- 7.2	+ 1.1	+ 3.1	- 0.1
Spreading rate / liter						
Raw material cost / liter		+ 3.6	- 4.6	- 0.9	- 2.8	- 6.4
<b>Total efficiency</b>		<b>+ 12.1</b>	<b>- 2.6</b>	<b>+ 2.0</b>	<b>+ 5.9</b>	<b>+ 6.3</b>



## IMPROVED FEATURES

Undiluted formulations / drying time before testing: 7 days / 23°C / 50 % relative humidity



## SUMMARY

**Silfit Z 91** gains the following combined benefits

- ✓ markedly improved hiding power and higher spreading rates compared to PCC
- ✓ TiO<sub>2</sub> reduction and thus white pigment saving without losing performance
- ✓ real cost cutting potential

**HOFFMANN**  
**MINERAL**