

NEUBURG SILICEOUS EARTH IN CLEANABLE LOW-GLOSS INTERIOR EMULSION PAINTS

OBJECTIVE

Improvement of stain resistance vs. benchmark fillers

Combination:
**Diatomaceous Earth
+ Nepheline Syenite**



**Neuburg Siliceous Earth:
Aktisil MAM**

FORMULATION

Water deionized	14.8		14.8
Additives	2.2		2.2
White pigment TiO ₂	25.7		25.7
Control fillers			Aktisil MAM
Diatomaceous Earth <small>coarse, flux calcined, 17 µm</small>	3.3		
Nepheline Syenite <small>coarse, 12 µm</small>	10.0		16.6
Nepheline Syenite <small>fine, 4.5 µm</small>	3.3		
Acronal Plus 6282	40.7		40.7
Total	100.0 %		100.0

Dilution with 5 % deionized water PVC ~ 41.5 % Solids content w/w ~ 60 %

FILLER RECOMMENDATION

AKTISIL MAM

superior stain resistance
high wet-scrub and dry burnish resistance
excellent hiding power
good matting

Basis: Guide formulation Stain03 by BASF

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RESULTS

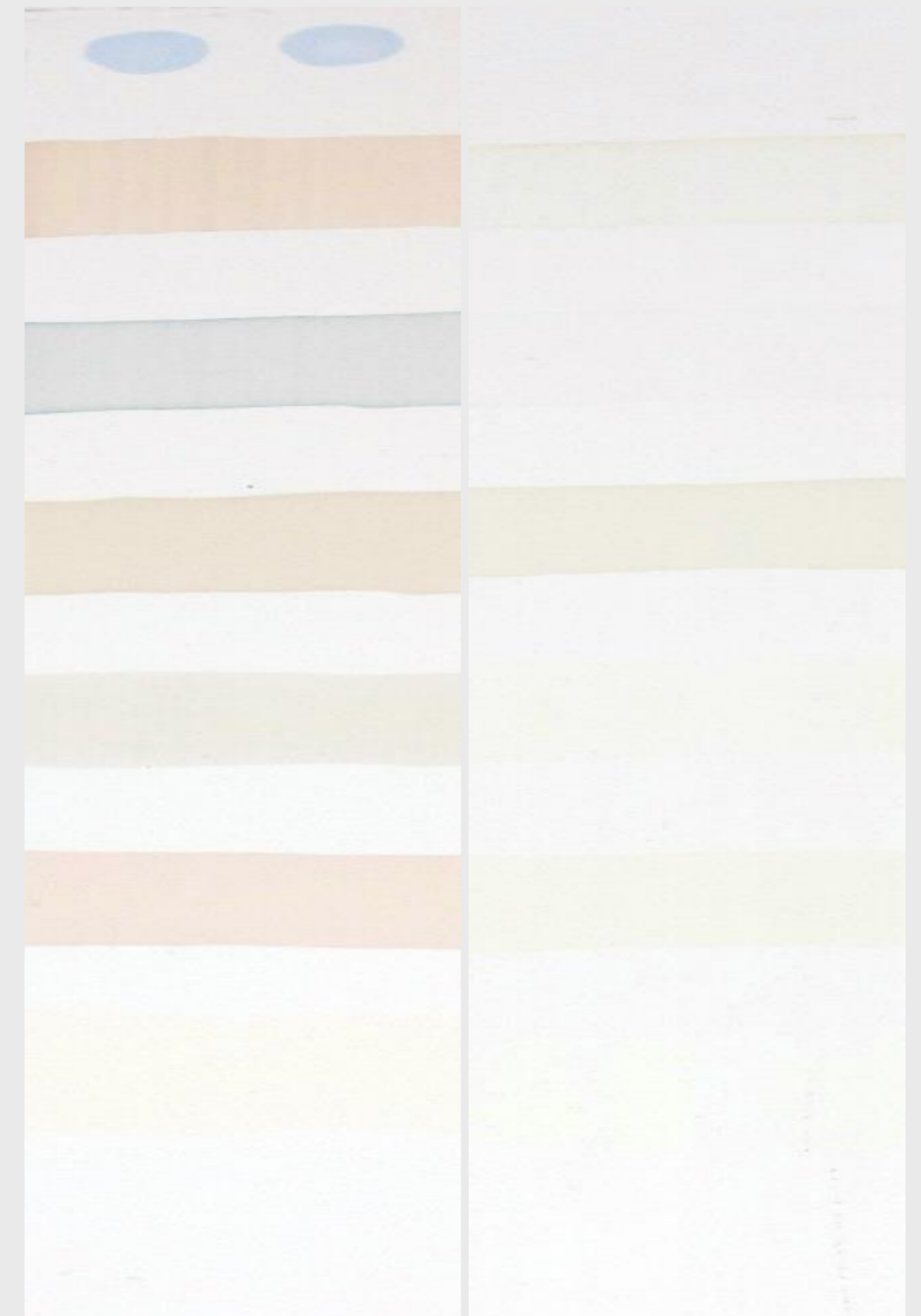
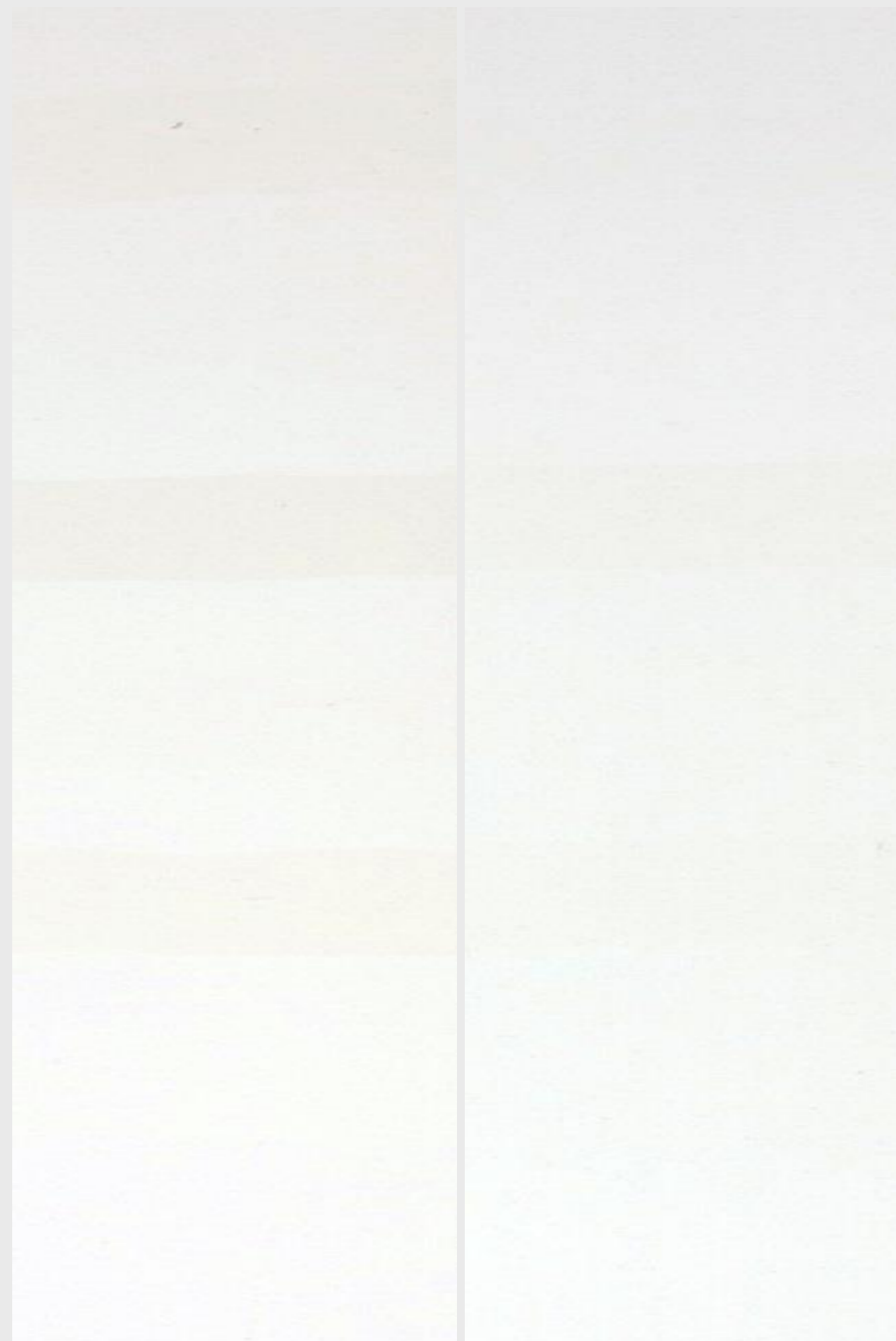
Exposure time before cleaning

5 min

2 h



Blue Ink
Black Tea
Fruit Tea
Coffee
Red Wine
Beetroot
Mustard
Ketchup



Measurement of color shift

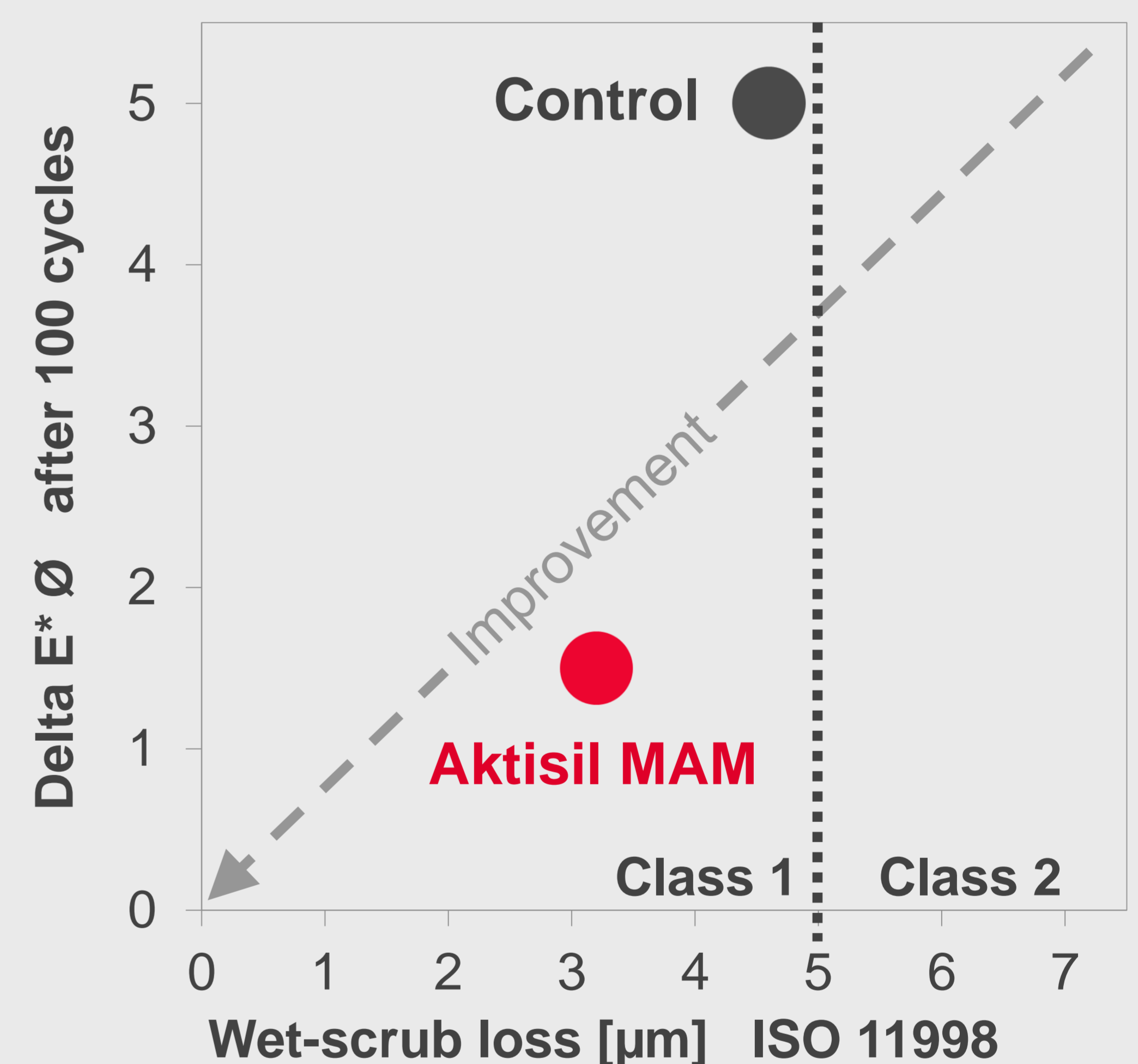
Control

**Aktisil
MAM**

Control

**Aktisil
MAM**

Delta E* Ø wiped off	5 min	1.6	0.8
+ wet-scrubbed		0.9	0.3
Delta E* Ø wiped off	2 h	6.8	2.7
+ wet-scrubbed		5.0	1.5
Wet-scrub loss	[µm]	4.6	3.2
Gloss 85°	[GU]	3.7	9.7
Dry Burnish	+ [GU]	0.7	1.4
Brightness L*		96.3	96.4
Spreading rate at contrast ratio 98 %	[m ² /l]	9.5	11.8



SUMMARY

Benefits of **Aktisil MAM**

compared to a combination of Diatomaceous Earth and Nepheline Syenite:

- ✓ Enhanced stain resistance for better and easier cleanability with significantly reduced soiling
- ✓ Optimized wet-scrub resistance for cleaning
- ✓ Strong, adjustable matting effect without further additives
- ✓ Better hiding power and spreading rates at high brightness
- ✓ Formulation with just one filler, despite free combinability with other fillers

**HOFFMANN
MINERAL**