

## Elementis Performance Series



## FINNTALC M04SLC - A cost saving solution for Architectural paint

Elementis, an industry leader in innovation and sustainability, has engineered functional talc fillers to provide optimized performance and cost savings compared to traditional fillers in your architectural paint formulas. Our application labs and technical experts are at your service to support you in order to maximize the benefits in your formulation.

Elementis' FINNTALC M04SLC offers cost savings of 10%/litre in pigmentation and is a TiO<sub>2</sub> replacement that can lead to minimum 10% replacement in low PVC paints and minimum 15% replacement in high PVC paints.

### Solution

#### Observations:

- In low PVC paints FINNTALC M04SLC can replace min. 10% of TiO<sub>2</sub> with no impact on paint properties
- In high PVC paints FINNTALC M04SLC can replace min. 15% of TiO<sub>2</sub> with no impact on paint properties
- This results in cost savings in pigmentation of ~ 10%/litre

#### Characteristics of FINNTALC M04SLC:

- Fine particle size: D50= 1,8 µm and Top Cut D98= 7,0 µm
- High whiteness: Ry > 90%
- Compacted => Dust-free, safety to use
- High bulk density reduces transport costs and improves handling of product (Big Bag's)
- Big Bag - handling reduces packing waste
- Can be used in Waterborne, Solventborne and powder coatings

## FINNTALC M04SLC was evaluated against competitive extenders in low & high PVC paints for Viscosity profile, density, hiding powder (wet & dry), color, gloss & wet scrub resistance

11.8% TiO <sub>2</sub> replacement – white paint	Standard	M04SLC	IT Extra	Calcined Kaolin	PCC-slurry
Brookfield 100 rpm (mPas)	2250	2340	1960	2020	2580
Brookfield 50 rpm (mPas)	3520	3700	3060	3140	4120
Brookfield 20 rpm (mPas)	6620	6940	5740	5900	7880
Brookfield 1 rpm (mPas)	61600	63200	53200	54000	75600
Density, g/cm <sup>3</sup>	1,37	1,37	1,37	1,36	1,34
Contrast ratio at spreading rate of 6,5 m <sup>2</sup> /l, %	98,9	98,9	98,8	98,8	98,7
Dry contrast ratio, wft= 150 µm, %	98,7	98,8	98,7	98,8	98,8
Wet Contrast ratio, wft= 150 µm, %	98,8	98,8	98,9	98,9	98,9
Whiteness of paint film, wft= 250 µm, %	88,5	88,0	88,1	88,3	88,1
CIE-colour coordinates,					
L*	95,38	95,20	95,21	95,29	95,21
a*	-0,76	-0,76	-0,76	-0,76	-0,73
b*	1,49	1,56	1,61	1,66	1,60
Δ L		0,24	0,17	0,09	0,17
Δ E		0,25	0,21	0,19	0,20
Gloss 60°, %	8,3	8,4	8,1	7,4	9,1
Gloss 85°, %	18,4	20,3	19,3	16,7	20,4
Mud cracking, µm	no cracking	no cracking	no cracking	no cracking	no cracking

17% TiO <sub>2</sub> replacement – white paint	Standard	M04SLC	IT-Extra	Calcined Kaolin	PCC-slurry	M15SL
Brookfield 100 rpm (mPas)	1580	1810	1550	1750	2070	1610
Brookfield 50 rpm (mPas)	2280	2690	2360	2590	3100	2370
Brookfield 20 rpm (mPas)	4100	4700	4140	4530	5460	4180
Brookfield 1 rpm (mPas)	37600	40000	36000	39200	43200	36200
Density, g/cm <sup>3</sup>	1,62	1,45	1,44	1,44	1,44	1,44
Dry contrast ratio, wft= 150 µm, %	97,3	97,1	97,1	96,9	96,6	96,8
Wet contrast ratio, wft= 150 µm, %	95,3	94,8	94,5	94,3	94,9	93,4
Whiteness of paint film, %	86,3	86,3	86,3	86,4	85,9	89,0
CIE-colour coordinates,						
L*	94,45	94,43	94,45	94,46	94,28	95,58
a*	-0,63	-0,6	-0,6	-0,59	-0,62	-0,62
b*	1,64	1,67	1,67	1,72	1,74	1,81
Δ L		0,02	0,00	0,01	0,17	1,13
Δ E		0,05	0,04	0,09	0,20	1,14
Gloss 60°, %	2,4	2,5	2,5	2,4	2,4	2,6
Gloss 85°, %	3,6	4,0	4,0	3,9	3,6	4,3
Mud cracking, µm	430	500	370	390	380	582
Wet scrub resistance according ISO 11998, µm	16	15	15	22	14	15

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