



Industrial coating

Anti-corrosion coating, water-based, white single-layer system, direct-to-metal (DTM)

Basis	Acrylate		SILLITIN Z 89	AKTIFIT Q
	L 00012.1		[52]	[56]
Pigment preparation	-- part 1 --			
	Demineralized water		5.90	5.90
	Edaplan 490	(1)	1.20	1.20
	AMP-90	(2)	0.02	0.02
	Byk-024	(3)	0.10	0.10
	Byk-349	(3)	0.18	0.18
	-- part 2 --			
	Kronos 2190	(4)	17.70	17.70
	SILLITIN Z 89	(5)	7.50	---
	AKTIFIT Q	(5)	---	7.50
-- part 3 --				
Demineralized water		2.90	2.90	
Let down	-- part 4 --			
	Alberdingk AC 2403	(6)	57.90	57.90
	-- part 5 --			
	Byk-024	(3)	0.15	0.15
	-- part 6 --			
	Asconium-142DA	(7)	1.90	1.90
	AMP-90	(2)	0.15	0.15
	Demineralized water		1.90	1.90
	-- part 7 --			
	Optifilm Enhancer 300	(8)	1.50	1.50
Ascotran-H10	(7)	0.50	0.50	
Tafigel PUR 60 solution)*	(1)	0.50	0.50	
Total % by weight			100.00	100.00

)* Tafigel PUR 60 solution:

Tafigel PUR 60	10.0
Dipropylene glycol monomethyl ether (DPM)	20.0
Demineralized water	70.0



Recommendation

SILLITIN Z 89 and AKTIFIT Q

- improvement of the adhesion after humidity test and salt spray test
- avoidance of under-film corrosion in the humidity test

SILLITIN Z 89

- reduced blistering at scribe in the salt spray test
- less delamination and rust creep at scribe

AKTIFIT Q

- avoidance of blistering at scribe in the salt spray test
- lowest delamination and rust creep at scribe

Mixing

Pigment preparation

- mix raw materials from part 1
- premix raw materials from part 2 and add to part 1
- disperse with high shear for 10 min under cooling
- complete with part 3

Let down

- charge Alberdingk AC 2403 and add pigment preparation while stirring
- add part 5
- premix part 6 and add the clear solution to the batch (if cloudy: discard)
- complete with part 7

Application

- after 35 d maturing time
- substrate: cold-rolled steel, Q-Panel type R-48
- spraying: diluted with 10 % water, nozzle 3 mm
- dry film thickness: approx. 70 µm, single-layer



Conditioning

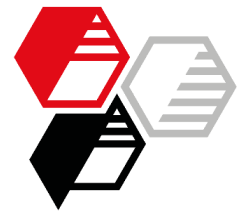
- drying conditions: 23 °C / 50 % relative humidity
- appearance and adhesion: 7d
- corrosion tests: 28 d

Suppliers

- (1) Münzing Chemie
- (2) Advancion
- (3) Byk Chemie
- (4) Kronos International
- (5) HOFFMANN MINERAL
- (6) Alberdingk Boley
- (7) Ascotec
- (8) Eastman Chemical Company



		Control with calcium carbonate	SILLITIN Z 89	AKTIFIT Q
	L 00012.1		[52]	[56]
Technical Data	Solids content (w/w)	%	all: 56	
	PVC	%	all: 21	
Properties	Dynamic viscosity @ 23 °C, 35 d			
	0.1 s ⁻¹	Pa·s	12.6	10.1
	100 s ⁻¹	Pa·s	0.335	0.285
	Color d/8° L*		97.0	96.4
	Color d/8° a*		-1.1	-1.0
	Color d/8° b*		2.3	2.9
	Gloss 60°	GU	68	52
	Gloss 60°			47
	Cross-cut test 2 mm, after tape tear-off		all: 0	
	Humidity test DIN EN ISO 6270-2 CH, 1000 h			
	Cross-cut test 2 mm, after tape tear-off		1-2	0-1
	Degree of blistering DIN EN ISO 4628-2		all: 0 (S0)	0-1
	Under-film corrosion, stripped			
				



	Control with calcium carbonate	SILLITIN Z 89	AKTIFIT Q	
L 00012.1		[52]	[56]	
Salt spray test DIN EN ISO 9227 NSS, 1000 h				
Cross-cut test 2 mm, after tape tear-off	0-1	0	0	
Degree of blistering DIN EN ISO 4628-2	all: 0 (S0)			
Under-film corrosion, stripped	all: no corrosion			
Blistering at scribe				
Delamination and rust creep at scribe				
Delamination	mm	26.3	17.9	4.8
Rust creep	mm	1.4	0.7	0.6

More information on this topic:

[DTM - Neuburg Siliceous Earth in Water-based Corrosion Protection - Acrylate Single-layer White](#)

Our applications engineering advice and the information contained in this formulation are based on experience and are made to the best of our knowledge and belief, they must be regarded however as non-binding advice without guarantee. Working and employment conditions over which we have no control exclude any damage claim arising from the use of our data and recommendations. Furthermore we cannot assume any responsibility for patent infringements, which might result from the use of our information.