Electrodeposition coating, cathodic, red
Single-layer, good corrosion protection, e. g. ACE-coating

Basis Acrylate hybrid

			Control	SILLITIN Z 86	SILLITIN Z 89	SILLITIN P 87	AKTISIL VM 56/89
	L 00058.1		[1]	[5]	[6]	[7]	[9]
Pigment preparation	*-- part 1 --*						
	Viacryl VSC 6292w/38WA	(1)	360	360	360	360	360
	-- part 2 --						
	Texanol	(2)	20	20	20	20	20
	Butyl glycol		6	6	6	6	6
	-- part 3 --						
	Demineralized water		285	220	220	220	220
	-- part 4 --						
	Surfynol 104, 1:1 in methoxypropanol	(3)	20	20	20	20	20
	-- part 5 --						
	Paliogen Red L 3910 HD	(4)	105	70	70	70	70
	Kronos 2190	(5)	75	50	50	50	50
	SILLITIN Z 86	(6)	---	125	---	---	---
	SILLITIN Z 89	(6)	---	---	125	---	---
	SILLITIN P 87	(6)	---	---	---	125	---
	AKTISIL VM 56/89	(6)	---	---	---	---	125
	-- part 6 --						
	Acetic acid 30 %		12	12	12	12	12
	Demineralized water		117	117	117	117	117
	Total parts by weight		1000	1000	1000	1000	1000
Bath formulation	Demineralized water		624	624	624	624	624
	Acetic acid 60 %		1	1	1	1	1
	Viacryl VSC 6292w/38WA	(1)	250	250	250	250	250
	Pigment preparation		125	125	125	125	125
	Total parts by weight		1000	1000	1000	1000	1000

Recommendation

SILLITIN Z 86
- good corrosion protection, best price-performance

SILLITIN Z 89
- high gloss, high color neutrality, high storage stability

SILLITIN P 87
- high gloss, high gloss consistency even on geometrically complex structures (L-effect)

AKTISIL VM 56/89
- high gloss, high color neutrality, high storage stability, good corrosion protection

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				Control	SILLITIN Z 86	SILLITIN Z 89	SILLITIN P 87	AKTISIL VM 56/89
	L 00058.1			[1]	[5]	[6]	[7]	[9]
Technical Data	Solids content w/w		%	13.6	14.4	14.4	14.4	14.4
	Pigment-binder-ratio			0.20	0.27	0.27	0.27	0.27
Properties	Color d/8°	L*		43.9	43.7	43.7	43.8	43.8
	Color d/8°	a*		47.9	47.4	47.2	47.2	47.1
	Color d/8°	b*		20.9	21.3	21.1	21.1	21.0
	Gloss 60°		GU	76	66	70	72	73
	Δ Gloss 60° between vertical and horizontal surfaces (L-effect)		Δ GU	4	14	11	8	13
	Salt spray test DIN EN ISO 9227 NSS, 500 h							
	Delamination at scribe		mm	6.2	3.1	4.7	3.6	2.4
								
	Delamination at edge		mm	2.6	2.3	2.2	2.6	2.1
								
	Humidity test DIN EN ISO 6270-2 CH, 1000 h							
	Coating damages DIN EN ISO 4628			all: characteristic values 0 (no changes)				
	Cross-cut test 1 mm, after tape tear-off							
	immediately					all: 0		
	after 24 h					all: 0		
	Stone impact test DIN EN ISO 20567-1B					all: Rating 1		
	Impact test (1kg Ø 20 mm) DIN EN ISO 6272-1		cm			all: ≥ 50		
	Pendulum hardness Koenig		s			all: > 160		
	Cross-cut test 1 mm, after tape tear-off					all: 0		
	Cupping test Erichsen		mm			all: > 6.5		

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L 00058.1

Mixing

Pigment preparation
- Present part 1, counter-cool
- Premix part 2 and add to part 1, mix for 5 min
- Add part 3
- Premix part 4, melt Surfynol 104 for this, add the mixture to the batch
- Part 5 stir in and grind for 5 min in a bead mill
- Premix part 6 and add slowly drop by drop, continue grind for 15 min

Bath formulation
- While stirring, add the pigment preparation to the other components
- Homogenize overnight

Application

Substrate:	cold-rolled, zinc phosphated steel Chemetall Type Gardobond 26S W OC
Deposition data:	2 min, 20 A, 260 - 290 V, 32°C
Curing conditions:	35 min 170°C
Dry film thickness:	~35 µm, single-layer

Suppliers

(1) Allnex
(2) Eastman Chemical Company
(3) Evonik Industries
(4) Sun Chemical
(5) Kronos International
(6) HOFFMANN MINERAL

More information on this topic:

Neuburg Siliceous Earth in cathodic electro deposition coatings acrylate single-layer red

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