

Industrial coating

Powder coating, for outdoor coatings, anthracite gray (RAL 7016) glossy, high corrosion and water spot resistance

Basis Polyester / Primid

		AKTIFIT PF 115	SILFIT Z 91
L 00003.1		[22]	[16]
Crylcoat 2618-3	(1)	75.00	75.00
Primid XL 552	(2)	3.60	3.60
Ceraflour 991	(3)	0.30	0.30
Pigments for RAL 7016		6.94	6.94
Byk-3900 P	(3)	1.00	1.00
Benzoin		0.40	0.40
AKTIFIT PF 115	(4)	12.76	---
SILFIT Z 91	(4)	---	12.76
Total % by weight		100.00	100.00

Recommendation **instead of the common used Blanc fixe (poor results in water-spot resistance)**

- [22] AKTIFIT PF 115: glossy appearance with low haze
fully retained color after water spot test
good flexibility
significantly reduced delamination after acetic salt spray test
- [16] SILFIT Z 91: distinctly improved flexibility
fully retained color after water spot test
significantly reduced delamination after acetic salt spray test

Preparation

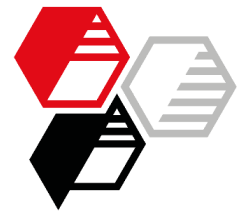
- Extruder: Coperion ZSK 18, heating zone 50/80/120/120/120°C, 800 min⁻¹
- Sieving: Retsch AS 200, sieve 125 µm, plus ultrasonic
- Milling: Alpine mill at approx. 17000 min⁻¹
- Application: automatic powder gun, 80 kV (Corona)
- Substrates: aluminum chromated (AL 48) and steel (R 48)
- Curing: 10 min PMT 180°C
The polyester resin requires a curing time of 10 min at a peak metal temperature of 180°C. Despite the filler addition, neither the curing time nor the curing temperature had to be increased.
- Dry film thickness 70-80 µm

Suppliers

- (1) Allnex
- (2) EMS-Griltech
- (3) Byk Chemie
- (4) HOFFMANN MINERAL

More information on this topic

[Polyester/Primid for Outdoor Coatings RAL 7016](#)



		AKTIFIT PF 115	SILFIT Z 91		
L 00003.1		[22]	[16]		
Optical properties	<u>Substrate: aluminum chromated</u>				
	Color L*		34.5	34.6	
	Color a*		-1.4	-1.4	
	Color b*		-2.9	-2.9	
	Gloss 60°	GU	89	87	
	Gloss 20°	GU	65	53	
	Haze	HU	237	364	
Mechanical properties	<u>Substrate: steel</u>				
	Mandrel bending test	DIN EN ISO 6860	mm	0	0
	Cross-cut test (2 mm)	DIN EN ISO 2409		0	0
	Cupping test	DIN EN ISO 1520	mm	>10	>10
	Reverse impact test	ASTM D 2794-93			
	1h after baking (2 lbs, Ø 15.9 mm)		inch-	>80	>80
	3d after baking (2 lbs, Ø 12.7 mm)		pounds	20	>80
	Direct impact test	ASTM D 2794-93			
1h after baking (with 80 inch lbs, Ø 15.9 mm)		cracks	no	no	
3d after baking (with 80 inch lbs, Ø 12.7 mm)			no	no	
Resistances	<u>Substrate: aluminum chromated</u>				
	Sodium hydroxide test (2N) according to GSB International				
	ΔE			0.1	0.1
	Water spot resistance according to GSB International (deionized water, 4h @ 58°C)				
	ΔL*			0.1	0.1
	Humidity test, 1000h DIN EN ISO 6270-2 CH				
	ΔE			0.2	0.2
	Acetic salt spray test, 1000h DIN EN ISO 9227 AASS				
	Delamination at scribe	DIN EN ISO 4628-8	mm	2.3	1.8
	Degree of blistering	DIN EN ISO 4628-2		0 (S0)	0 (S0)
	Artificial weathering QUV B, 313 nm, 300h				
	Remaining gloss 60°		%	73	75
Outdoor exposure Florida, exposed 45° south					
Remaining gloss 60° (after 280 MJ/m²)		%	87	92	
Remaining gloss 60° (after 420 MJ/m²)		%	26	21	

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