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Industrial coating
Anti-corrosion primer for high requirements
very high solid, VOC 250 g/l, good acid resistance

Basis: Epoxy resin (bisphenol A + bisphenol A/F and polyamidoamine adduct)

			R 24403 C
Component A	Araldite GZ 7071 X 75	(1)	130.87
	Araldite GY 783	(1)	98.15
	Luvotix P 25 X	(2)	1.00
	n-Butanol		40.00
	Byk-057	(3)	3.50
	Zinkphosphat ZP 10	(4)	53.90
	Bayferrox 222	(5)	35.90
	AKTISIL AM	(6)	212.33
Component B	Shellsol A 100	(7)	39.10
	Aradur 450	(1)	81.20
	Total parts by weight		695.95

Preparation The preparation of component A was realized by dissolver with adapted bead mill after predispersion by grinding (20 min, 7.8 m/s). Before adding pigment and filler, the liquid parts of component A are premixed for 5 min (using a part of the grinding beads). For activating Luvotix, the temperature of the mill base should exceed 55°C.

Application spraying by air pressure, single-layered with a dry film thickness of 250 µm on cold-rolled steel (Sa 2½, sandblasted medium (G) according to ISO 8503-1)

Technical Data	Solids content (m/m)	%	85
	PVC	%	29
	VOC	g/l	250

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Properties			Control with talc and barite	R 24403 C with AKTISIL AM
	Fineness of grind		µm	20
Sedimentation component A	28 d, 50°C		<i>a lot of, hard</i>	none
Dynamic viscosity A+B	0.1 s ⁻¹ , 23°C	Pa·s	10.2	15.4
Dynamic viscosity A+B	1000 s ⁻¹ , 23°C	Pa·s	2.4	1.7
Pot life (viscosity doubled)		min	50	66
Pendulum hardness after 336 h		s	76	95
Cross-cut test (3 mm after tape tear-off)			0	0-1
Abrasion loss (DIN 53 754: S 42, 5.4 N, 100 rev.)		mg	253	128

Salt spray test DIN EN ISO 9227 NSS, 4000 h

Rating according to DIN EN ISO 4628 part 2-5 and 8

Degree of blistering			0	0
Degree of rusting			0	0
Degree of cracking			0	0
Degree of flaking			0	0
Degree of corrosion around a scribe	mm		< 0.3	< 0.3
Degree of delamination around a scribe	mm		34	23
Cross-cut test (3 mm after tape tear-off)			0-1	0-1

Humidity test DIN EN ISO 6270-2 CH, 2000 h

Rating according to DIN EN ISO 4628 part 2-5 and 8

Degree of blistering			0	0
Degree of rusting			0	0
Degree of cracking			0	0
Degree of flaking			0	0
Degree of corrosion around a scribe	mm		0.4	0.3
Degree of delamination around a scribe	mm	<i>not evaluated</i>		not evaluated
Cross-cut test (3 mm after tape tear-off)			0-1	0-1

Chemical resistance DIN EN ISO 2812-1

Rating according to DIN EN ISO 4628 part 2

10 % sulfuric acid, 23°C	1000 h		5 (S5)	0
10 % acetic acid, 23°C	168 h		3-4 (S4)	3-4 (S3)*

* To improve the resistance to organic acids, a cycloaliphatic hardener based on IPD is recommended, whereby results comparable to aromatic amine hardeners can be attained:

10 % acetic acid, 23°C	168 h		0	0
	760 h		4 (S4)	2-3 (S5)

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Suppliers	(1) Huntsman Advanced Materials
	(2) Lehmann & Voss
	(3) Byk Chemie
	(4) Heubach
	(5) Lanxess
	(6) HOFFMANN MINERAL
	(7) Shell Chemicals

More information on this topic is available in this technical report:

[Neuburg Siliceous Earth in High Solid Epoxy Coatings](#)

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