

**Industrial coating**  
**Powder coating for pipelines**  
**good corrosion protection and hot water resistance**

**Basis** Epoxy resin (bisphenol A and accelerated dicyandiamide)

R 34401.2		[9]	[11]	[13]
Epikote Resin 1055	(1)	827.00	827.00	827.00
Epikure Curing Agent P-104	(1)	33.00	33.00	33.00
Byk-368 P	(2)	10.00	10.00	10.00
Bayferrox 222	(3)	15.00	15.00	15.00
SILLITIN Z 86	(4)	148.57	---	---
AKTISIL AM	(4)	---	148.57	---
AKTISIL MM	(4)	---	---	148.57
Total parts by weight		1033.57	1033.57	1033.57

**Recommendation**

- [9] SILLITIN Z 86: favorable price/performance ratio
- [11] AKTISIL AM: best results in resistance tests
- [13] AKTISIL MM: low delamination and better mechanical properties

**Preparation**

- premix and extrusion in a twin screw extruder (MP 19, APV Baker)  
D = 19 mm and L = 25 D, screw speed 300 min<sup>-1</sup>
- grind at 16000 min<sup>-1</sup>
- screening through 100 µm mesh

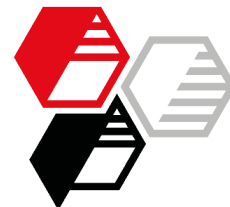
**Application**

- for optical assessments and Martens hardness with corona spray gun (70 kV) on Q-Panel sheets R 36; film thickness 110-120 µm
- for mechanical and chemical tests by tribo application on blasted steel sheets (surface roughness 50-70 µm, before application pre-heated to 200°C); film thickness approx. 400 µm
- curing at 200°C subject temperature for 10 min

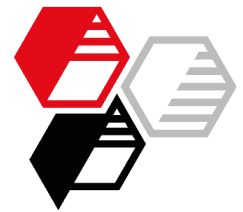
**Suppliers**

- (1) Hexion
- (2) Byk Chemie
- (3) Lanxess
- (4) HOFFMANN MINERAL

**More information on this topic:**  
[Neuburg Siliceous Earth for Epoxy Pipeline Powder Coatings](#)



	R 34401.2		[9]	[11]	[13]
<b>Technical Data</b>	PVC	%	7.6	7.6	7.6
<b>Properties</b>	Gel time <i>ISO 8130-6</i>	s	40-48	40-48	40-48
	Gloss 20° <i>DIN EN ISO 2813</i>	GU	71	67	60
	Gloss 60° <i>DIN EN ISO 2813</i>	GU	96	95	93
	Martens hardness <i>DIN EN ISO 14577</i>	N/mm <sup>2</sup>	140-160	140-160	140-160
	Abrasion loss CS 17, 1 kg, 1000 rev. <i>ASTM D 4060-01</i>	mg	37	28	35
	S 42, 5.4 N, 100 rev. <i>DIN 53754</i>	mg	50	57	54
	Impact test <i>DIN EN ISO 6272-1</i>	kg-cm	> 200	> 200	> 200
	Reverse impact test <i>DIN EN ISO 6272-1</i>	kg-cm	40-60	60-80	> 100
	Cupping test <i>DIN EN ISO 1520</i>	mm	9,9	> 10	> 10
	Mandrel bending test (32 mm) <i>DIN EN ISO 1519</i>		fine cracks	fine cracks	fine cracks
	Cross-cut test <i>DIN EN ISO 2409</i>		0	0	0



R 34401.2		[9]	[11]	[13]
<b>Salt spray test 2000 h</b>				
<i>DIN EN ISO 9227</i>				
Delamination around a scribe	mm	4.5	4.8	5.3
<i>DIN EN ISO 4628-8</i>				
Corrosion around a scribe	mm	0.4	0.5	0.6
<i>DIN EN ISO 4628-8</i>				
<b>Humidity test 4000 h</b>				
<i>DIN EN ISO 6270-2</i>				
Delamination around a scribe	mm	0.4	0.3	0
<i>DIN EN ISO 4628-8</i>				
Cross-cut test		0	0	0
<i>DIN EN ISO 2409</i>				
<b>Chemical resistance, immersion in distilled water at 90°C, 1700 h</b>				
<i>DIN EN ISO 2812-2</i>				
Color change delta E		1.0	1.3	2.9
<i>Illuminant D65, geometry d/8°</i>				
Remaining gloss 60°	%	86	95	98
<i>DIN EN ISO 2813</i>				
Remaining pendulum hardness	%	83	90	89
<i>DIN EN ISO 1522</i>				
Cross-cut test		0	0	0
<i>DIN EN ISO 2409</i>				
<b>Chemical resistance, immersion in 10 % sulfuric acid at 23°C, 1000 h</b>				
<i>DIN EN ISO 2812-1</i>				
optical change		no	no	no
<b>Chemical resistance, immersion in 10 % caustic soda at 23°C, 1500 h</b>				
<i>DIN EN ISO 2812-1</i>				
optical change		no	no	no
<b>Cathodic disbondment</b>	mm	0-1	0-1	0-1
<i>DIN EN ISO 15711</i>		<i>formulation without fillers: approx. 10 mm</i>		

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.