



## Industrial coating

### Anti-corrosion 2K epoxy clear coat, water-based improved blushing resistance

**Basis** Epoxy resin (solid epoxy resin and hydrophobic amine)

			Control	SILLITIN Z 89 15 pbw	SILFIT Z 91 15 pbw	AKTISIL AM 15 pbw	AKTISIL AM 25 pbw	TP 2008037 25 pbw
	L 00001.1		[1]	[3]	[6]	[4]	[15]	[26]
<b>Component A</b>	Beckocure EH 2260w/41WA	(1)	61.1	61.1	61.1	61.1	61.1	61.1
	SILLITIN Z 89	(2)	---	15.0	---	---	---	---
	SILFIT Z 91	(2)	---	---	15.0	---	---	---
	AKTISIL AM	(2)	---	---	---	15.0	25.0	---
	TP 2008037	(2)	---	---	---	---	---	25.0
<b>Component B</b>	Beckopox EP 147w	(1)	12.5	12.5	12.5	12.5	12.5	12.5
	Beckopox EP 386w/52WA	(1)	37.5	37.5	37.5	37.5	37.5	37.5
	Total parts by weight		111.1	126.1	126.1	126.1	136.1	136.1

<b>Recommendation</b>	[3]	SILLITIN Z 89:	best price/performance ratio
	[6]	SILFIT Z 91:	color neutral, improved blushing resistance
	[4]	AKTISIL AM:	good corrosion resistance, reduced delamination at scribe
	[15]	AKTISIL AM:	best corrosion resistance, nearly no delamination at scribe
	[26]	TP 2008037:	like AKTISIL AM, but more color neutral

**Mixing** The preparation of component A was realized by dissolver with adapted bead mill after predispersion by grinding.  
The raw materials of component B were premixed.

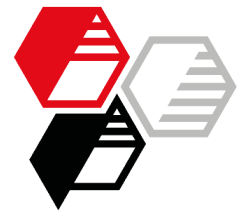
**Application** Mix component A and B shortly before application and dilute with water to spray viscosity.  
Compressed air spraying, Walther Pilot spray gun, nozzle diameter 2 mm, approx. 1.7 bar  
Substrate: steel (Gardobond OC) and aluminum (Gardobond F), both without surface treatment  
Drying: 30 min at 60 °C, dry film thickness 50-80 µm  
The tests were run after storage 7 d at 23 °C / 50 % rH

**Suppliers**

(1)	Allnex
(2)	HOFFMANN MINERAL



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<b>Technical Data</b>							
PVC	%	0	9.9	9.9	9.9	15.5	15.5
Solids content (not diluted)	%	51.4	57.1	57.1	57.1	60.3	60.3
<u>Optical properties</u>							
Substrate: steel (Gardobond OC)							
Color d/8°	L*	67.6	65.7	63.8	64.5	63.3	63.7
Color d/8°	a*	0.1	0.1	0.2	-0.1	-0.1	0.1
Color d/8°	b*	1.1	3.8	3.7	7.5	9.6	5.0
<u>Mechanical properties</u>							
Substrate: steel (Gardobond OC) and aluminum (Gardobond F)							
Cross-cut test (1 mm)		0	0	0	0	0	0
<i>DIN EN ISO 2409</i>							
Substrate: steel (Gardobond OC)							
Cupping test (Ericksen)	mm	10.0	8.3	8.0	7.9	6.3	7.4
<i>DIN EN ISO 1520</i>							
<u>Humidity test DIN EN ISO 6270-2 CH, 240 h</u>							
Substrate: steel (Gardobond OC) and aluminum (Gardobond F)							
Degree of blistering							
<i>DIN EN ISO 4628-2</i> all: no blistering							
Degree of rusting							
<i>DIN EN ISO 4628-3</i> all Ri 0: no rusting							
Substrate: aluminum (Gardobond F)							
Blushing resistance,							
measured as $\Delta E$ before/after		6.6	4.7	2.5	4.2	3.1	3.6
humidity test							
<i>A higher <math>\Delta E</math> indicates a higher opacity (corresponding to a stronger milky-white blushing).</i>							









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Salt spray test DIN EN ISO 9227 NSS, 240 h

Substrate: steel (Gardobond OC)

Delamination at scribe (∅)  
DIN EN ISO 4628-8

mm	20.9	4.0	5.3	2.8	1.5	1.7
						

Substrate: aluminum (Gardobond F)

Delamination at scribe  
DIN EN ISO 4628-8

all: no delamination, no rusting

**More information on this topic**

[Optimization of Corrosion Protection Properties of Waterborne 2C Epoxy Clear Coats](#)

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