

2K Epoxy Structural Adhesive toughened with reactive liquid rubber ATBN

Basis Epoxy resin (bisphenol A and mannich base)

	L00043.1	Control without filler [1]	SILLITIN V 85 [5]	SILLITIN Z 86 PURISS [6]	AKTISIL PF 777 [8]
Component A					
Epikote Resin 320	(1)	100	100	100	100
SILLITIN V 85	(2)	---	50	---	---
SILLITIN Z 86 PURISS	(2)	---	---	50	---
AKTISIL PF 777	(2)	---	---	---	50
Total parts by weight Component A		100	150	150	150
Component B					
Epikure Curing Agent 05903	(1)	34	34	34	34
Hypro 1300x16 ATBN	(3)	8.5	8.5	8.5	8.5
Total parts by weight Component A+B		142.5	192.5	192.5	192.5

Recommendation

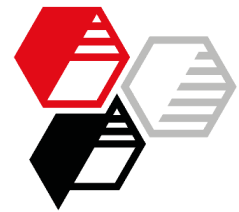
SILLITIN V 85 Standard product, high lap shear strength
 SILLITIN Z 86 PURISS easy to disperse, high lap shear strength
 AKTISIL PF 777 rheologically active, highest lap shear strength

Suppliers

- (1) Westlake
- (2) HOFFMANN MINERAL
- (3) Huntsman

More information on this topic:

[Neuburg Siliceous Earth in toughened 2K-epoxy-structural-adhesive](#)



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Mixing / Processing

Component A was prepared with a speedmixer:

Resin + half of filler	30 s @ 800 rpm
+ rest of filler	30 s @ 800 rpm
clean lid and rim	60 s @ 1000 rpm
clean lid, rim and bottom	300 s @ 2000 rpm

Mixing before application was also carried out on the speedmixer:

Component A + B	60 s @ 1000 rpm + 120 s @ 2000 rpm
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Rheology

Viscosity component A

@ 0.1 s-1	Pa·s	1	27	48	138
@ 100 s-1	Pa·s	1	5	6	9
Viscosity component A+B					
@ 0.1 s-1	Pa·s	4	12	16	53
@ 100 s-1	Pa·s	4	9	10	10

Storage stability component A

Sedimentation, 8 w @ RT	---	without	without	without
Change in rheology, 12 w @ RT	---	no	no	no

Mechanical properties, Cr3 passivated aluminum, 100 µm adhesive layer

Lap shear strength	MPa	2.5	3.6	3.3	4.5
Peel resistance T-Peel	N/100 mm	50	51	39	41

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