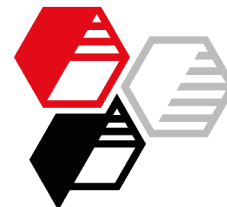


**Adhesive based on silane-terminated polyether, high strength
e. g. parquet adhesive meeting the requirements of DIN EN 14293 for “hard” and
“soft” adhesives
60 Shore A**

Basis silane-terminated polyether

		SILLITIN V 85	SILFIT Z 91	AKTIFIT VM
V44303.2		[2]	[4]	[6]
Geniosil STP-E 10	(1)	25.5	25.5	25.5
Caradol ED 56-200	(2)	15.0	15.0	15.0
Geniosil XL 10	(1)	2.0	2.0	2.0
HDK H 18	(1)	2.0	2.0	2.0
SILLITIN V 85	(3)	47.0	---	---
SILFIT Z 91	(3)	---	47.0	---
AKTIFIT VM	(3)	---	---	47.0
Geniosil GF 96	(1)	1.0	1.0	1.0
Total parts by weight		92.5	92.5	92.5

Recommendation			
[2]	SILLITIN V 85	very cost-effective high strength	
[4]	SILFIT Z 91	low moisture content white and color-neutral cost effective very high strength	
[6]	AKTIFIT VM	very low moisture content and practically no moisture absorption at damp conditions white and color-neutral very high strength excellent hot water resistance and adhesion on aluminum	



V44303.2

[2]

[4]

[6]

Mixing

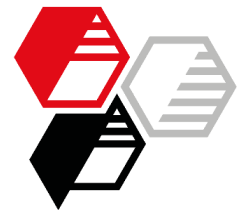
For the preparation a planetary mixer equipped with two kneading tools and scraper is suitable.

The formulation is prepared at room temperature in typically 10-15 min.

- charge polymer Geniosil STP-E 10, plasticizer Caradol ED 56-200 and drying agent Geniosil XL 10
- add rheological additive HDK H 18 while stirring
- add filler (not pre-dried) while stirring
- disperse 2 min at 600 rpm
- add adhesion promoter Geniosil GF 96
- disperse 1 min at 600 rpm under vacuum
- remove compound from the stirrer
- disperse 1 min at 600 rpm under vacuum
- degas 1 min at 200 rpm under vacuum
- fill into a cartridge

Suppliers

- (1) Wacker Chemie
- (2) Shell Chemicals
- (3) HOFFMANN MINERAL



			SILLITIN V 85	SILFIT Z 91	AKTIFIT VM	
V44303.2			[2]	[4]	[6]	
Properties	Complex viscosity	DIN 54458				
	@ 50 % deformation		Pa·s	58	53	54
	@ 0.1 % deformation		Pa·s	83	71	62
	Loss factor tanδ @ 0.1 % deformation		-	2.7	5.2	5.9
	Hardness	DIN ISO 7619-1	Shore A	58	64	61
	Tensile strength	DIN 53504, S2	MPa	5.0	6.1	6.8
	Elongation at break	DIN 53504, S2	%	152	151	157

Lap shear test, DIN EN 14293, substrate: oak

1 mm adhesive layer – „soft“ parquet adhesive

required: lap shear strength > 0.5 MPa, displacement > 2 (@ 1 mm adhesive layer)

Lap shear strength	MPa	3.9	4.1	4.4
Displacement	mm	2.6	2.3	2.9
Adhesion (visual assessment)		+	+	+

approx. 0.1 mm adhesive layer – „hard“ parquet adhesive

required: lap shear strength after 3 d > 3.0 MPa, after 28 d > 3.5 MPa

Lap shear strength	3 d	MPa	3.8	4.0	5.0
Lap shear strength	28 d	MPa	4.0	4.5	4.5
Adhesion (visual assessment)			+	+	+

Lap shear test according to DIN EN 204, substrate: pure aluminum

Lap shear strength, 2 mm adh. layer	MPa	2.3	3.1	3.0
Adhesion (visual assessment)		0	+	+

after immersion in deionized water 6 h @ 95 °C + 2 h @ 20 °C

Lap shear strength	MPa	2.1	2.4	3.0
Change Lap shear strength	%	-8.7	-20.3	-2.6
Adhesion (visual assessment)		+	0	+

More information on this topic:

[Neuburg Siliceous Earth in Adhesives Based on Silane-terminated Polyether, e. g. Parquet Adhesives](#)