Sealant based on MS Polymer™
30 Shore A

Basis silane-terminated polyether

		SILLITIN Z 86	AKTISIL PF 777
V44423.1		[5]	[20]
MS Polymer™ S303H	(1)	100	100
Jayflex DIUP	(2)	100	100
Sachtleben R-FK-2	(3)	20	20
Crayvallac SLX	(4)	5	5
SILLITIN Z 86	(5)	180	---
AKTISIL PF 777	(5)	---	180
Tinuvin 770	(6)	1	1
Tinuvin 327	(6)	1	1
Dynasylan VTMO	(7)	2	2
Dynasylan AMEO	(7)	5	5
Catalyst (dibutyltin diacetylacetonate)		2	2
Total parts by weight		416	416

Note ***This formulation is intended to show the basic effects of the various Neuburg Siliceous Earth grades, although the raw materials used are in some cases no longer state of the art or are subject to other restrictions.***

Recommendation Bright color formulations can be achieved with SILLITIN Z 89.
For better dispersibility and mechanical properties SILLITIN Z 86 PURISS is recommended.
AKTISIL PF 777 (formulation 20) improves the chemical resistance.

Mixing For the preparation a planetary mixer equipped with dissolver disc, kneading tool and scraper is suitable.

- pre-dry filler and titanium dioxide
- charge binding agent, plasticizer, light stabilizer and rheological additive
- add filler and titanium dioxide and disperse 45 min under vacuum; during this time keep the temperature of the batch between 60 and 90°C for 30 min in order to sufficiently activate the rheological additive
- after cooling down to 50°C, add drying agent, bonding agent and catalyst at intervals of 5 min and stir in
- after short deaeration, fill the compound into a cartridge

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Technical Data	Hardness	DIN ISO 7619-1	Shore A	31	28
	Tensile strength	DIN 53504, S2	MPa	2.4	2.0
	Modulus 25 %	DIN 53504, S2	MPa	0.4	0.3
	Modulus 50 %	DIN 53504, S2	MPa	0.6	0.5
	Modulus 100 %	DIN 53504, S2	MPa	1.3	0.9
	Elongation at break	DIN 53504, S2	%	212	384
	Lap shear strength (LSS) aluminum 99.5 (12.5 x 25 x 2 mm)	DIN EN 1465	MPa	1.50	1.31
	Displacement at LSS	DIN EN 1465	mm	6.6	8.8
	Chemical resistance				
	Immersion in sulfuric acid 10 %, 7d/23°C				
	Volume change		%	+6.8	+1.4
	Tensile strength	DIN 53504, S2	MPa	1.8	1.8
	Elongation at break	DIN 53504, S2	%	268	376
	Δ Tensile strength		*%*	*-26.9*	*-9.6*
	Δ Elongation at break		*%, rel.*	*+26.5*	*-2.1*
	Immersion in deionized water, 7d/50°C				
	Lap shear strength (LSS) aluminium 99.5 (12.5 x 25 x 2 mm)	DIN EN 1465	MPa	1.24	1.18
	LSS after re-drying 3d/23°C		MPa	1.53	1.46
	Δ Lap shear strength		*%*	*-17.3*	*-9.9*
	Δ LSS after re-drying		*%*	*+2.0*	*+11.5*

Suppliers

(1) Kaneka
(2) ExxonMobil
(3) Venator Materials Corporation
(4) Cray Valley
(5) HOFFMANN MINERAL
(6) BASF
(7) Evonik Industries

More information on this topic:

Neuburg Siliceous Earth in MS-Polymer Based Sealants

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