



ELECTRICAL APPLICATION

Capacitor gasket

High mineral filler / low carbon black loading

75/80 Shore A, IIR, resin cure

		SILFIT Z 91	AKTISIL VM 56	AKTIFIT VM	AKTIFIT VM 175 phr
Guide formulations of HOFFMANN MINERAL	M 620.0	3	4	8	19
Butyl 268		100	100	100	100
Ruß N-774		50	50	50	50
SILFIT Z 91		150	---	---	---
AKTISIL VM 56		---	150	---	---
AKTIFIT VM		---	---	150	175
Zinkoxyd aktiv		5	5	5	5
Stearic acid		2	2	2	2
Dispergator FL		2	2	2	2
Tackirol 201		18	18	18	18
Total phr		327	327	327	352
Density	g/cm ³	1.51	1.51	1.51	1.56

SILFIT Z 91: Counter product to non-surface-treated calcined kaolin with improved processing properties, better hot air aging and lower compression set

AKTISIL VM 56: Standard product, balanced properties

AKTIFIT VM: Counter product to surface-treated (vinyl silane) calcined kaolin with improved processing properties and lower compression set, high hardness and high tensile moduli



			SILFIT Z 91	AKTISIL VM 56	AKTIFIT VM	AKTIFIT VM 175 phr
M 620.0			3	4	8	19
Mooney Viscosity						
ML (1+4) 120°C	DIN 53523, T3	MU	69	74	68	72
Mooney Scorch						
ML (5 MU) 120°C	DIN 53523, T4	min	18	15	22	25
Rotorless curemeter, 200°C						
Mmin	DIN 53529, T3	Nm	0.11	0.13	0.10	0.10
Mmax	DIN 53529, T3	Nm	0.52	0.55	0.58	0.42
t ₅	DIN 53529, T3	min	0.68	0.75	0.83	0.57
t ₉₀	DIN 53529, T3	min	9	11	11	5
Physical properties						
Press cure 6 min @ 200°C + Post cure 2 h @ 190°C						
Hardness (piled S2)	DIN ISO 7619-1	Shore A	73	76	73	81
Modulus 50 %	DIN 53504, S2	MPa	2.0	2.6	3.0	3.2
Modulus 100 %	DIN 53504, S2	MPa	2.9	4.2	5.0	5.1
Tensile strength	DIN 53504, S2	MPa	4.7	5.8	6.1	5.6
Elongation at break	DIN 53504, S2	%	314	303	249	230
Tear resistance	DIN ISO 34-1, A	N/mm	6.6	8.1	7.2	6.1
Volume resistivity 100 V, 1 min	DIN IEC 93	Ω cm	3.4 x 10 ¹⁴	6.9 x 10 ¹⁴	5.6 x 10 ¹⁴	3.9 x 10 ¹⁴
Compression set, DIN ISO 815-1, B, cooling method A						
72 h @ 105°C, 25 % deflection		%	11	11	8	8
72 h @ 125°C, 25 % deflection		%	20	17	15	13
72 h @ 135°C, 25 % deflection		%	26	21	24	20



		SILFIT Z 91	AKTISIL VM 56	AKTIFIT VM	AKTIFIT VM 175 phr
	M 620.0	3	4	8	19
Air aging, 72 h @ 105°C, DIN 53508					
Hardness (piled S2)	Shore A	72	75	77	79
Modulus 50 %	MPa	2.1	2.8	3.0	3.3
Modulus 100 %	MPa	3.0	4.4	5.0	5.1
Tensile strength	MPa	4.1	5.5	6.1	5.5
Elongation at break	%	303	271	240	187
Δ Hardness	Shore A	-1	-1	+4	-2
Δ Modulus 50 %	%	+3	+9	+1	+2
Δ Modulus 100 %	%	+2	+5	+1	-1
Δ Tensile strength	%	-13	-4	-1	-3
Δ Elongation at break	%, rel.	-3	-11	-4	-19
Air aging, 72 h @ 125°C, DIN 53508					
Hardness (piled S2)	Shore A	72	75	75	80
Modulus 50 %	MPa	2.3	2.9	3.1	3.6
Modulus 100 %	MPa	3.3	4.6	5.1	5.3
Tensile strength	MPa	4.1	5.5	6.0	5.6
Elongation at break	%	259	239	298	263
Δ Hardness	Shore A	-1	-1	+2	-1
Δ Modulus 50 %	%	+14	+9	+4	+10
Δ Modulus 100 %	%	+13	+1	+2	+4
Δ Tensile strength	%	-13	-5	-2	-1
Δ Elongation at break	%, rel.	-18	-21	-20	-29
Air aging, 72 h @ 135°C, DIN 53508					
Hardness (piled S2)	Shore A	73	76	77	80
Modulus 50 %	MPa	2.4	2.9	3.1	3.4
Modulus 100 %	MPa	3.5	4.5	5.2	5.1
Tensile strength	MPa	4.0	5.2	6.1	5.4
Elongation at break	%	223	210	200	159
Δ Hardness	Shore A	0	0	+4	-1
Δ Modulus 50 %	%	+21	+12	+5	+4
Δ Modulus 100 %	%	+21	+6	+3	-1
Δ Tensile strength	%	-14	-9	0	-4
Δ Elongation at break	%, rel.	-29	-31	-20	-31

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