



ELECTRICAL APPLICATION

Capacitor gasket

High mineral filler / low carbon black loading with phenolic crosslinker resin

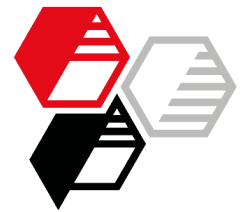
80/85 Shore A, IIR, resin cure

		SILFIT Z 91	AKTISIL VM 56	AKTIFIT VM	AKTIFIT VM 175 phr
Guide formulations of HOFFMANN MINERAL	M 620.0	12	13	17	20
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
Phenodur EP 560		2	2	2	2
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		329	329	329	354
Density	g/cm ³	1.51	1.51	1.51	1.55

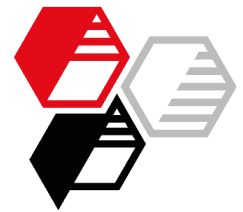
SILFIT Z 91: Counter product to non-surface-treated calcined kaolin with improved processing properties and lower compression set

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			12	13	17	20
Mooney Viscosity						
ML (1+4) 120°C	DIN 53523, T3	MU	60	70	59	63
Mooney Scorch						
ML (5 MU) 120°C	DIN 53523, T4	min	36	29	34	22
Rotorless curemeter, 200°C						
Mmin	DIN 53529, T3	Nm	0.10	0.14	0.10	0.11
Mmax	DIN 53529, T3	Nm	0.72	0.66	0.67	0.51
t ₅	DIN 53529, T3	min	0.80	0.64	0.69	0.53
t ₉₀	DIN 53529, T3	min	20	13	15	6
Physical properties						
Press cure 6 min @ 200°C + Post cure 2 h @ 190°C						
Hardness (piled S2)	DIN ISO 7619-1	Shore A	79	82	82	86
Modulus 50 %	DIN 53504, S2	MPa	2.6	3.7	4.0	4.4
Modulus 100 %	DIN 53504, S2	MPa	3.5	5.5	6.1	6.1
Tensile strength	DIN 53504, S2	MPa	5.3	6.7	7.2	6.4
Elongation at break	DIN 53504, S2	%	287	221	204	161
Tear resistance	DIN ISO 34-1, A	N/mm	5.2	6.2	5.6	5.4
Volume resistivity 100 V, 1 min	DIN IEC 93	Ω cm	6.0 x 10 ¹³	5.5 x 10 ¹⁴	2.0 x 10 ¹⁴	1.8 x 10 ¹⁴
Compression set, DIN ISO 815-1, B, cooling method A						
72 h @ 105°C, 25 % deflection		%	15	12	14	12
72 h @ 125°C, 25 % deflection		%	24	18	24	17
72 h @ 135°C, 25 % deflection		%	34	28	32	26



		SILFIT Z 91	AKTISIL VM 56	AKTIFIT VM	AKTIFIT VM 175 phr
	M 620.0	12	13	17	20
Air aging, 72 h @ 105°C, DIN 53508					
Hardness (piled S2)	Shore A	78	81	83	85
Modulus 50 %	MPa	2.8	3.8	4.0	4.2
Modulus 100 %	MPa	3.5	5.5	5.9	5.6
Tensile strength	MPa	4.9	6.1	7.0	6.0
Elongation at break	%	267	166	193	156
Δ Hardness	Shore A	-1	-1	+1	-1
Δ Modulus 50 %	%	+5	+3	0	-4
Δ Modulus 100 %	%	+1	-1	-4	-7
Δ Tensile strength	%	-7	-9	-4	-5
Δ Elongation at break	%, rel.	-7	-25	-5	-3
Air aging, 72 h @ 125°C, DIN 53508					
Hardness (piled S2)	Shore A	80	82	80	86
Modulus 50 %	MPa	3.0	4.0	4.1	4.4
Modulus 100 %	MPa	3.7	5.6	5.9	5.9
Tensile strength	MPa	4.4	6.4	8.0	6.2
Elongation at break	%	219	171	180	125
Δ Hardness	Shore A	+1	0	-1	0
Δ Modulus 50 %	%	+13	+8	+2	+1
Δ Modulus 100 %	%	+6	+2	-3	-3
Δ Tensile strength	%	-17	-5	-3	-2
Δ Elongation at break	%, rel.	-24	-23	-11	-22
Air aging, 72 h @ 135°C, DIN 53508					
Hardness (piled S2)	Shore A	82	83	83	86
Modulus 50 %	MPa	3.1	4.0	4.2	4.4
Modulus 100 %	MPa	3.8	5.6	6.0	5.7
Tensile strength	MPa	4.2	6.3	6.8	5.9
Elongation at break	%	190	155	164	117
Δ Hardness	Shore A	+3	+1	+1	0
Δ Modulus 50 %	%	+18	+7	+4	0
Δ Modulus 100 %	%	+9	+1	-3	-5
Δ Tensile strength	%	-21	-7	-6	-7
Δ Elongation at break	%, rel.	-34	-30	-19	-28

Our applications engineering advice and the information contained in this formulation are based on experience and are made to the best of our knowledge and belief, they must be regarded however as non-binding advice without guarantee. Working and employment conditions over which we have no control exclude any damage claim arising from the use of our data and recommendations. Furthermore we cannot assume any responsibility for patent infringements, which might result from the use of our information.