OTHER APPLICATION
Molding, light-colored

FKM: low viscosity, high curative level
80 Shore A, FKM, bisphenol cure

		AKTIFIT AM	AKTIFIT PF 115	AKTIFIT PF 111	AKTISIL Q	SILFIT Z 91
Guide formulations of HOFFMANN MINERAL	M 629	3/10	5/4	3/14	3/6	3/8
Viton A-201C		100	100	100	100	100
Elastomag 170		3	3	3	3	3
Vulcofac F45		6	6	6	6	6
AKTIFIT AM		45	---	---	---	---
AKTIFIT PF 115		---	45	---	---	---
AKTIFIT PF 111		---	---	45	---	---
AKTISIL Q		---	---	---	45	---
SILFIT Z 91		---	---	---	---	45
Total phr		154	154	154	154	154

AKTIFIT AM:
- fastest cure speed
- high tensile strength
- very good resistance to water and fuel

AKTIFIT PF 115:
- low viscosity
- highest tensile strength
- very good abrasion resistance
- very good resistance to water and fuel and at the same time to oil

AKTIFIT PF 111:
- high tensile strength
- higher elongation at break than AKTIFIT AM or AKTIFIT PF 115
- better compression set (VW) than AKTIFIT AM

AKTISIL Q:
- low viscosity
- very good compression set
- good resistance to water and oil

SILFIT Z 91:
- highest elongation at break
- very good compression set
- medium resistances

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			AKTIFIT AM	AKTIFIT PF 115	AKTIFIT PF 111	AKTISIL Q	SILFIT Z 91
		M 629	3/10	5/4	3/14	3/6	3/8
Mooney Viscosity							
ML (Min) 120°C	DIN 53523, T3	MU	67	60	63	59	66
Rotorless curemeter, 177°C							
Mmin	DIN 53529, T3	Nm	0.057	0.043	0.046	0.042	0.057
Curing rate	DIN 53529, T3	Nm/min	2.77	2.54	1.64	1.44	1.60
t_{90}	DIN 53529, T3	min	1.5	1.8	2.8	3.1	2.7
Mechanical properties							
Press cure 10 min @ 177°C + post cure 24 h @ 232°C							
Density	DIN EN ISO 1183-1	g/cm³	2,01	2,02	2,01	2,01	2,02
Hardness	DIN ISO 7619-1	Shore A	81	81	83	79	80
Tensile strength	DIN 53504, S2	MPa	13.9	16.2	14.5	15.2	12.2
Modulus 50 %	DIN 53504, S2	MPa	4.6	4.6	4.7	4.5	4.2
Modulus 100 %	DIN 53504, S2	MPa	10.0	10.5	9.0	9.4	7.4
Elongation at break	DIN 53504, S2	%	134	149	174	165	213
Tear resistance	DIN ISO 34-1, A	N/mm	3.4	3.5	4.0	3.5	4.9
Compression set	DIN ISO 815-1, B						
70 h @ 200°C, 25 % deflection		%	18	---	17	18	17
70 h @ 232°C, 25 % deflection		%	39	38	40	34	32
Compression set	VW PV 3307						
22 h @ 150°C, 50 % deflection, 5 s		%	43	40	34	33	33
Abrasion (10 N)	DIN ISO 4649	mm³	170	152	180	180	182
Air aging, 70 h @ 232°C, post cured specimen							
Hardness		Shore A	81	81	83	79	80
Tensile strength		MPa	13.0	15.6	15.6	14.1	13.7
Elongation at break		%	135	144	144	162	196
Δ Hardness		Shore A	0	0	0	0	0
Δ Tensile strength		%	-6	-4	-4	-7	+13
Δ Elongation at break		%, rel.	+1	-4	-4	-2	-8
Immersion in distilled water, 168 h @ 60°C, post cured specimen							
Hardness		Shore A	81	81	81	79	80
Tensile strength		MPa	14.7	14.2	10.1	12.4	9.0
Elongation at break		%	173	157	206	185	242
Δ Hardness		Shore A	0	0	-2	0	0
Δ Tensile strength		%	+6	-12	-30	-19	-26
Δ Elongation at break		%, rel.	+30	+5	+18	+12	+14
Δ Weight		%	+0.5	-0.5	+0.6	+0.7	+0.8
Δ Volume		%	+0.1	+0.2	+0.4	+0.5	+0.7

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		AKTIFIT AM	AKTIFIT PF 115	AKTIFIT PF 111	AKTISIL Q	SILFIT Z 91
	M 629	3/10	5/4	3/14	3/6	3/8
Immersion in FAM B, 70 h @ 23°C, post cured specimen						
Hardness	Shore A	71	70	71	68	68
Tensile strength	MPa	9.6	11.1	9.0	7.6	7.0
Elongation at break	%	113	122	148	105	197
Δ Hardness	Shore A	-10	-11	-12	-11	-12
Δ Tensile strength	%	-31	-32	-38	-50	-42
Δ Elongation at break	%, rel.	-15	-18	-15	-37	-7
Δ Weight	%	+5.8	+5.7	+6.3	+7.7	+7.0
Δ Volume	%	+14	+14	+15	+19	+17
Immersion in OS 206 304, 168 h @ 150°C, post cured specimen						
Hardness	Shore A	79	78	82	80	81
Tensile strength	MPa	12.5	17.3	16.7	12.8	10.8
Elongation at break	%	112	151	151	117	150
Δ Hardness	Shore A	-2	-3	-1	+1	+1
Δ Tensile strength	%	-10	+7	+15	-16	-12
Δ Elongation at break	%, rel.	-16	+1	-14	-29	-29
Δ Weight	%	+0.6	+0.5	+0.5	+0.7	+0.7
Δ Volume	%	+0.7	+1.0	+0.7	+0.6	+0.8

More information on this topic:

Neuburg Siliceous Earth in bisphenolic cured FKM

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