OTHER APPLICATION
Molding, light-colored

FKM: low viscosity, high curative level
70 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	3/9	5/3	3/13	3/5	3/7
Viton A-201C		100	100	100	100	100
Elastomag 170		3	3	3	3	3
Vulcofac F45		6	6	6	6	6
AKTIFIT AM		30	---	---	---	---
AKTIFIT PF 115		---	30	---	---	---
AKTIFIT PF 111		---	---	30	---	---
AKTISIL Q		---	---	---	30	---
SILFIT Z 91		---	---	---	---	30
Total phr		139	139	139	139	139

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	3/9	5/3	3/13	3/5	3/7
Mooney Viscosity							
ML (Min) 120°C	DIN 53523, T3	MU	53	49	51	48	53
Rotorless curemeter, 177°C							
Mmin	DIN 53529, T3	Nm	0.039	0.028	0.043	0.032	0.038
Curing rate	DIN 53529, T3	Nm/min	2.25	1.66	1.46	1.69	1.51
t_{90}	DIN 53529, T3	min	1.8	2.3	3.0	3.4	2.9
Mechanical properties							
Press cure 10 min @ 177°C + post cure 24 h @ 232°C							
Density	DIN EN ISO 1183-1	g/cm³	1.97	1.97	1.97	1.96	1.97
Hardness	DIN ISO 7619-1	Shore A	72	71	72	71	73
Tensile strength	DIN 53504, S2	MPa	14.3	14.9	13.2	12.3	11.6
Modulus 50 %	DIN 53504, S2	MPa	2.7	4.9	2.9	2.9	2.8
Modulus 100 %	DIN 53504, S2	MPa	6.5	8.9	6.2	6.6	5.3
Elongation at break	DIN 53504, S2	%	185	181	206	177	242
Tear resistance	DIN ISO 34-1, A	N/mm	3.3	3.6	3.9	3.4	4.0
Compression set	DIN ISO 815-1, B						
70 h @ 200°C, 25 % deflection		%	13	---	13	14	12
70 h @ 232°C, 25 % deflection		%	37	38	39	35	32
Compression set	VW PV 3307						
22 h @ 150°C, 50 % deflection, 5 s		%	41	40	36	29	36
Abrasion (10 N)	DIN ISO 4649	mm³	167	156	172	196	181
Air aging, 70 h @ 232°C, post cured specimen							
Hardness		Shore A	72	72	73	71	74
Tensile strength		MPa	14.8	15.0	13.2	12.2	12.0
Elongation at break		%	207	178	201	185	221
Δ Hardness		Shore A	0	+1	+1	0	+1
Δ Tensile strength		%	+4	+1	0	-1	+4
Δ Elongation at break		%, rel.	+12	-2	-2	+5	-9
Immersion in distilled water, 168 h @ 60°C, post cured specimen							
Hardness		Shore A	72	71	73	71	72
Tensile strength		MPa	13.4	13.3	9.8	10.8	9.4
Elongation at break		%	215	206	246	214	281
Δ Hardness		Shore A	0	0	+1	0	-1
Δ Tensile strength		%	-6	-11	-25	-12	-19
Δ Elongation at break		%, rel.	+16	+14	+20	+21	+16
Δ Weight		%	+0.5	+0.5	+0.6	+0.7	+0.7
Δ Volume		%	+0.2	+0.2	+0.3	+0.4	+0.5

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		AKTIFIT AM	AKTIFIT PF 115	AKTIFIT PF 111	AKTISIL Q	SILFIT Z 91
	M 629	3/9	5/3	3/13	3/5	3/7
Immersion in FAM B, 70 h @ 23°C, post cured specimen						
Hardness	Shore A	60	61	61	60	59
Tensile strength	MPa	8.9	8.3	7.4	6.1	6.3
Elongation at break	%	147	134	164	113	198
Δ Hardness	Shore A	-12	-10	-11	-11	-14
Δ Tensile strength	%	-37	-44	-44	-51	-46
Δ Elongation at break	%, rel.	-21	-26	-20	-36	-18
Δ Weight	%	+7.0	+7.0	+7.6	+8.8	+8.1
Δ Volume	%	+17	+17	+18	+21	+20
Immersion in OS 206 304, 168 h @ 150°C, post cured specimen						
Hardness	Shore A	68	70	69	72	71
Tensile strength	MPa	11.5	15.3	15.8	10.7	9.4
Elongation at break	%	143	182	199	137	173
Δ Hardness	Shore A	-4	-1	-3	+1	-2
Δ Tensile strength	%	-19	+3	+20	-12	-19
Δ Elongation at break	%, rel.	-23	0	-3	-22	-28
Δ Weight	%	+0.7	+0.5	+0.5	+0.7	+0.7
Δ Volume	%	+1.2	+1.1	+0.9	+0.7	+1.0

More information on this topic:

Neuburg Siliceous Earth in bisphenolic cured FKM

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