OTHER APPLICATION
Molding, light-colored

FKM: medium viscosity, low 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	2/3	5/1	2/5	2/1	2/6
Dyneon FC 2181Z		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:
- fast cure speed
- high tensile strength
- very good abrasion resistance
- good resistance to water and fuel

AKTIFIT PF 115:
- fastest cure speed
- low viscosity
- 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 oil resistance than AKTIFIT AM

AKTISIL Q:
- low viscosity
- high elongation at break
- very good compression set
- good resistance to water and oil

SILFIT Z 91:
- highest elongation at break
- medium resistances

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			AKTIFIT AM	AKTIFIT PF 115	AKTIFIT PF 111	AKTISIL Q	SILFIT Z 91
		M 629	2/3	5/1	2/5	2/1	2/6
Mooney Viscosity							
ML (Min) 120°C	DIN 53523, T3	MU	99	85	86	86	90
Rotorless curemeter, 177°C							
Mmin	DIN 53529, T3	Nm	0.101	0.084	0.090	0.088	0.100
Curing rate	DIN 53529, T3	Nm/min	1.76	1.82	1.03	0.71	0.66
t_{90}	DIN 53529, T3	min	1.6	1.4	2.2	2.8	3.1
Mechanical properties							
Press cure 7 min @ 177°C + post cure 16 h @ 230°C							
Density	DIN EN ISO 1183-1	g/cm³	1.97	1.96	1.97	1.96	1.97
Hardness	DIN ISO 7619-1	Shore A	69	69	70	69	69
Tensile strength	DIN 53504, S2	MPa	16.6	15.8	15.5	15.8	15.3
Modulus 50 %	DIN 53504, S2	MPa	2.2	2.3	2.3	2.1	2.2
Modulus 100 %	DIN 53504, S2	MPa	5.0	4.4	5.3	4.7	4.4
Elongation at break	DIN 53504, S2	%	229	250	224	242	289
Tear resistance	DIN ISO 34-1, A	N/mm	3.6	3.9	3.9	3.9	4.8
Compression set	DIN ISO 815-1, B						
70 h @ 200°C, 25 % deflection		%	18	---	18	16	21
70 h @ 232°C, 25 % deflection		%	36	36	34	34	37
Compression set	VW PV 3307						
22 h @ 150°C, 50 % deflection, 5 s		%	43	47	45	37	55
Abrasion (10 N)	DIN ISO 4649	mm³	122	139	131	154	141
Air aging, 70 h @ 232°C, post cured specimen							
Hardness		Shore A	68	69	70	68	70
Tensile strength		MPa	16.2	16.9	17.8	13.8	16.0
Elongation at break		%	217	258	245	210	238
Δ Hardness		Shore A	-1	0	0	-1	+1
Δ Tensile strength		%	-2	+7	+15	-13	+4
Δ Elongation at break		%, rel.	-5	+3	+9	-13	-18
Immersion in distilled water, 168 h @ 60°C, post cured specimen							
Hardness		Shore A	68	68	68	67	68
Tensile strength		MPa	13.5	14.1	10.6	12.2	9.9
Elongation at break		%	265	279	321	301	385
Δ Hardness		Shore A	-1	-1	-2	-2	-1
Δ Tensile strength		%	-19	-11	-32	-23	-36
Δ Elongation at break		%, rel.	+16	+12	+44	+24	+33
Δ Weight		%	+0.7	+0.5	+0.7	+0.8	+0.9
Δ Volume		%	+0.8	+0.2	+0.6	+0.6	+0.9

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	M 629	2/3	5/1	2/5	2/1	2/6
Immersion in FAM B, 70 h @ 23°C, post cured specimen						
Hardness	Shore A	58	58	58	57	57
Tensile strength	MPa	10.3	10.3	10.0	7.7	7.8
Elongation at break	%	195	195	201	185	340
Δ Hardness	Shore A	-11	-11	-11	-12	-12
Δ Tensile strength	%	-38	-38	-37	-51	-49
Δ Elongation at break	%, rel.	-15	-15	-19	-24	+18
Δ Weight	%	+6.1	+6.1	+6.2	+6.5	+6.8
Δ Volume	%	+15	+15	+15	+16	+17
Immersion in OS 206 304, 168 h @ 150°C, post cured specimen						
Hardness	Shore A	68	67	69	67	69
Tensile strength	MPa	16.7	15.9	16.8	13.5	14.9
Elongation at break	%	227	240	255	209	290
Δ Hardness	Shore A	-1	-2	-1	-2	0
Δ Tensile strength	%	+1	0	+8	-15	-3
Δ Elongation at break	%, rel.	-1	-4	+14	-14	0
Δ Weight	%	+0.6	+0.4	+0.6	+0.6	+0.5
Δ Volume	%	+0.9	+0.8	+1.0	+0.9	+0.5

More information on this topic:

Neuburg Siliceous Earth in bisphenolic cured FKM

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