



SPECIAL TOPICS

Silicone rubber compounds with Silfit Z 91 Curing agent "Bis-(2,4-dichlorobenzoyl) peroxide" 45-65 Shore A, Q, peroxide cure

	Basis	SILFIT Z 91			
		25 phr	50 phr	75 phr	
Guide formulations of HOFFMANN MINERAL	M 619.1	1	2	3	4
Elastosil R 401/40		100.0	100.0	100.0	100.0
SILFIT Z 91		---	25.0	50.0	75.0
Elastosil AUX Curing Agent E		1.5	1.5	1.5	1.5
Total phr		101.5	126.5	151.5	176.5

Mooney Viscosity

ML (1+4) @ 70°C	DIN 53523, T3	MU	15	17	19	20
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Mooney Scorch

ML (5 MU) @ 70°C	DIN 53523, T4	min	28	33	46	54
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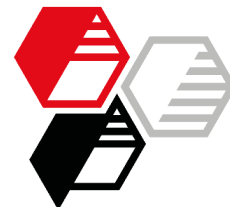
Rotorless curemeter, 115°C

Mmin	DIN 53529, T3	Nm	0.040	0.049	0.067	0.078
Mmax-Mmin	DIN 53529, T3	Nm	0.359	0.460	0.528	0.549
Cure rate	DIN 53529, T3	Nm/min	0.63	0.92	1.08	1.10
t ₉₀	DIN 53529, T3	min	1.1	1.0	1.1	1.1

Mechanical properties

Press cure 5 min @ 115°C

Hardness	DIN ISO 7619-1	Shore A	44	51	58	60
Tensile strength	DIN 53504, S2	MPa	10.2	8.8	7.2	6.5
Elongation at break	DIN 53504, S2	%	560	514	431	398
Modulus 100 %	DIN 53504, S2	MPa	0.9	1.4	2.2	2.2
Tear resistance (Graves)	DIN ISO 34-1, Bb	N/mm	7.6	6.7	7.4	7.9
Rebound	DIN 53512	%	60	59	51	47
Compression set 24 h @ 175°C, 25 %	DIN ISO 815-1, B	%	31	40	49	52



	M 619.1	Basis 1	SILFIT Z 91			
			25 phr 2	50 phr 3	75 phr 4	
Post cure 4 h @ 200°C						
Density	DIN EN ISO 1183-1	g/cm ³	1.12	1.27	1.39	1.44
Hardness		Shore A	45	51	59	63
Tensile strength		MPa	10.2	8.9	8.0	7.2
Elongation at break		%	560	446	330	294
Modulus 100 %		MPa	0.9	1.5	2.5	2.6
Tear resistance (Graves)		N/mm	2.6	7.3	6.7	6.5
Rebound		%	41	36	30	30
Compression set 24 h @ 175°C, 25 %		%	33	39	43	43
Air aging, 168 h @ 200°C, post cured specimen						
Hardness		Shore A	43	50	60	65
Tensile strength		MPa	8.6	7.5	6.9	6.0
Elongation at break		%	480	361	243	214
Δ Hardness		Shore A	-2	-1	+1	+2
Δ Tensile strength		%	-45	-16	-14	-17
Δ Elongation at break		%, rel.	-14	-19	-26	-27
Immersion in reference oil IRM 903, 72 h @ 150°C, post cured specimen						
Hardness		Shore A	21	28	34	36
Tensile strength		MPa	3.6	4.8	5.6	5.2
Elongation at break		%	265	285	303	283
Δ Hardness		Shore A	-24	-23	-25	-27
Δ Tensile strength		%	-64	-46	-30	-28
Δ Elongation at break		%, rel.	-53	-36	-8	-4
Δ Weight		%	+51	+38	+31	+27
Δ Volume		%	+62	+53	+46	+43

Blooming, post cured specimen



More information on this topic:

[Silfit Z 91 in Silicone Rubber](#)

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