

SPECIAL TOPICS

Elastomer component in TPE-V, high filler content

Substitution of tin(II) chloride dihydrate

EPDM, resin cure

	Reference	Recommendation without SnCl ₂
Guide formulations of HOFFMANN MINERAL	M 564.1/4	M 564.1/25
Buna EP G 3569 LF)*	200	200
Zinkoxyd aktiv	5	5
Tin(II) chloride dihydrate crystalline	3	---
SP-1056	10	10
SILLITIN V 88	100	---
AKTISIL MAM	---	100
Total phr	318	315

)* No longer available. Recommended: 175 phr Keltan 4577 + 25 phr paraffin oil

Mooney Viscosity

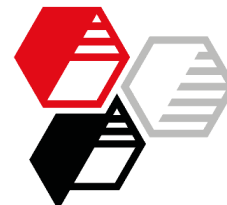
ML (1+4) 120°C	DIN 53523, T3	MU	29.7	29.0
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Mooney Scorch

ML (5 MU) 120°C	DIN 53523, T4	min	11.8	34.5
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Rotorless curemeter, 200°C

Mmin	DIN 53529, T3	Nm	0.034	0.042
Mmax	DIN 53529, T3	Nm	0.333	0.334
t ₅	DIN 53529, T3	min	0.48	0.46
t ₉₀	DIN 53529, T3	min	7.55	6.45



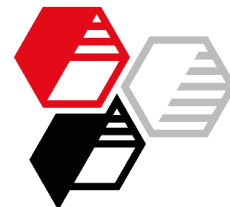
Reference	Recommendation without SnCl ₂
M 564.1/4	M 564.1/25

Physical properties**Press cure @ 200°C**

			8.3 min	7.1 min
Density	DIN EN ISO 1183-1	g/cm ³	1.14	1.12
Hardness	DIN ISO 7619-1	Shore A	30	29
Hardness (piled S2)	DIN ISO 7619-1	Shore A	32	32
Modulus 100 %	DIN 53504, S2	MPa	0.6	0.6
Modulus 300 %	DIN 53504, S2	MPa	1.1	2.0
Modulus 500 %	DIN 53504, S2	MPa	1.5	3.3
Tensile strength	DIN 53504, S2	MPa	7.7	3.6
Elongation at break	DIN 53504, S2	%	805	555
Rebound	DIN 53512	%	66	64
Tear resistance	DIN ISO 34-1, A	N/mm	4.1	4.7
Tear resistance (Graves)	DIN ISO 34-1, B	N/mm	6.7	6.6
Abrasion (5 N)	DIN ISO 4649	mm ³	195	156
Compression set	DIN ISO 815, B			
24 h @ 100°C, 25 % deflection		%	19	19
24 h @ 150°C, 25 % deflection		%	46	40
72 h @ 23°C, 25 % deflection		%	9	7

Air aging, 168 h @ 150°C, DIN 53508

Hardness		Shore A	41	40
Modulus 100 %		MPa	1.1	1.2
Modulus 300 %		MPa	2.5	4.1
Tensile strength		MPa	3.3	4.9
Elongation at break		%	415	385
Rebound		%	74	70
Tear resistance	DIN ISO 34-1, A	N/mm	3.2	4.0
Tear resistance (Graves)	DIN ISO 34-1, B	N/mm	4.6	5.4
Δ Hardness		Shore A	+11	+11
Δ Modulus 100 %		%	+93	+96
Δ Modulus 300 %		%	+126	+107
Δ Tensile strength		%	-57	+36
Δ Elongation at break		%, rel.	-49	-30
Δ Rebound		%, rel.	+12	+9
Δ Tear resistance		%	-23	+15
Δ Tear resistance (Graves)		%	-31	+18



Reference	Recommendation without SnCl ₂
M 564.1/4	M 564.1/25

Immersion in ASTM Oil 1, 168 h @ 100°C, DIN 53521

Hardness (piled S2)	Shore A	17	20
Modulus 100 %	MPa	0.5	0.7
Modulus 300 %	MPa	1.1	---
Tensile strength	MPa	1.2	2.4
Elongation at break	%	390	290
Δ Hardness	Shore A	-15	-12
Δ Modulus 100 %	%	-5	+15
Δ Modulus 300 %	%	-4	---
Δ Tensile strength	%	-85	-34
Δ Elongation at break	%, rel.	-52	-48
Δ Weight	%	+76	+73
Δ Volume	%	+98	+94

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