

OTHER APPLICATION

Generally

Effect of the filler level on heat conductivity and mechanical properties

25-60 Shore A, EPDM, peroxide cure

Guide formulations of HOFFMANN MINERAL	M 519.1	10	20	21	17
Keltan 512x50		150.0	150.0	150.0	150.0
Zinkoxyd aktiv		5.0	5.0	5.0	5.0
Stearic acid		1.0	1.0	1.0	1.0
SILLITIN Z 86		---	65.5	145.5	200.0
TAC/GR 50		2.0	2.0	2.0	2.0
Perkadox 14-40		8.0	8.0	8.0	8.0
Total phr		166.0	231.5	311.5	366.0
Density	g/cm ³	0.92	1.13	1.32	1.43

)* No longer available. Recommended: Keltan 4450 + 50 phr paraffin oil

Mooney Viscosity

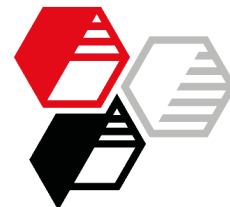
ML (1+4) 120°C	DIN 53523, T3	MU	35	37	55	73
----------------	---------------	----	----	----	----	----

Mooney Scorch

ML (5 MU) 120°C	DIN 53523, T4	min	> 120	> 120	> 120	46
-----------------	---------------	-----	-------	-------	-------	----

Rotorless curemeter, 180°C

M _{max} - M _{min}	DIN 53529, T3	Nm	0.29	0.38	0.52	0.64
t ₅	DIN 53529, T3	min	0.73	0.62	0.55	0.51
t ₉₀	DIN 53529, T3	min	5.95	5.65	5.35	4.88



			M 519.1	10	20	21	17
Physical properties							
Cure @ 180°C				6.5 min	6.2 min	5.9 min	5.4 min
Hardness	DIN ISO 7619-1	Shore A		27	37	51	58
Modulus 100 %	DIN 53504, S2	MPa		0.6	0.9	1.6	2.0
Modulus 300 %	DIN 53504, S2	MPa		---	2.1	3.4	3.9
Tensile strength	DIN 53504, S2	MPa		1.4	4.7	9.1	8.4
Elongation at break	DIN 53504, S2	%		290	640	720	750
Rebound	DIN 53512	%		68	64	56	50
Tear resistance	DIN ISO 34-1, A	N/mm		1.5	3.9	9.4	14.5
Compression set 24 h @ 100°C	DIN ISO 815, B	%		7	8	12	17
Heat conductivity							
parallel to section		W/mK		0.22	0.37	0.56	0.63
at 90° to section		W/mK		---	---	---	0.55

More information on this topic:

[Effects of Fillers on the Thermal Conductivity of Elastomers](#)

Our applications engineering advice and the information contained in this formulation are based on experience and are made to the best of our knowledge and belief, they must be regarded however as non-binding advice without guarantee. Working and employment conditions over which we have no control exclude any damage claim arising from the use of our data and recommendations. Furthermore we cannot assume any responsibility for patent infringements, which might result from the use of our information.