

OTHER APPLICATION

Generally

75 Shore A, HNBR, peroxide cure

Guide formulation of HOFFMANN MINERAL		M 507.3/2
Therban 3407		100.0
Stearic acid		1.0
Zinkoxyd aktiv		2.0
Magnesium oxide		10.0
Naugard 445		1.0
Vulkanox ZMB2/C-5		0.4
AKTISIL VM 56		100.0
TAIC 50 %		3.0
Perkadox 14-40		7.5
Total phr		224.9

Mooney Viscosity

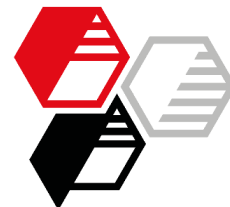
ML (1+4) 120°C	DIN 53523, T3	MU	86
----------------	---------------	----	----

Mooney Scorch

ML (5 MU) 120°C	DIN 53523, T4	min	60.2
-----------------	---------------	-----	------

Rotorless curemeter, 170°C

Mmin	DIN 53529, T3	Nm	0.11
Mmax	DIN 53529, T3	Nm	1.18
t ₅	DIN 53529, T3	min	0.81
t ₉₀	DIN 53529, T3	min	11.3



M 507.3/2

Physical properties**Press cure 12.5 min @ 170°C**

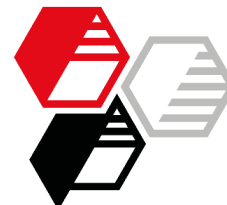
Hardness	DIN ISO 7619-1	Shore A	75
Modulus 100 %	DIN 53504, S2	MPa	8.9
Tensile strength	DIN 53504, S2	MPa	16.9
Elongation at break	DIN 53504, S2	%	205
Rebound	DIN 53512	%	47
Tear resistance	DIN ISO 34-1, A	N/mm	4.1
Abrasion	DIN ISO 4649	mm ³	97
Compression set 70 h @ 150°C	DIN ISO 815, B	%	47

Post cure 6h @ 150°C

Density	DIN EN ISO 1183-1	g/cm ³	1.435
Hardness	DIN ISO 7619-1	Shore A	77
Modulus 100 %	DIN 53504, S2	MPa	11.8
Tensile strength	DIN 53504, S2	MPa	18.8
Elongation at break	DIN 53504, S2	%	155
Rebound	DIN 53512	%	42
Tear resistance	DIN ISO 34-1, A	N/mm	5.2
Abrasion	DIN ISO 4649	mm ³	85
Compression set 24 h @ 100°C	DIN ISO 815, B	%	12
70 h @ 150°C		%	29

Air aging, 168 h @ 150°C, DIN 53508, post cured specimen

Hardness	Shore A	81
Modulus 100 %	MPa	16.1
Tensile strength	MPa	20.8
Elongation at break	%	150
Rebound	%	38
Δ Hardness	Shore A	+4
Δ Modulus 100 %	%	+36
Δ Tensile strength	%	+11
Δ Elongation at break	%, rel.	-4
Δ Rebound	%, rel.	-10



M 507.3/2

Air aging, 500 h @ 150°C, DIN 53508, post cured specimen

Hardness	Shore A	82
Modulus 100 %	MPa	17.5
Tensile strength	MPa	20.3
Elongation at break	%	140
Rebound	%	37
Δ Hardness	Shore A	+5
Δ Modulus 100 %	%	+48
Δ Tensile strength	%	+8
Δ Elongation at break	%, rel.	-10
Δ Rebound	%, rel.	-12

Immersion in ASTM Oil 3, 72 h @ 150°C, DIN 53521, specimen not post cured

Hardness (piled S2 specimen)	Shore A	67
Modulus 100 %	MPa	9.7
Tensile strength	MPa	16.9
Elongation at break	%	190
Δ Hardness	Shore A	-8
Δ Modulus 100 %	%	+10
Δ Tensile strength	%	0
Δ Elongation at break	%, rel.	-8
Δ Weight	%	+13
Δ Volume	%	+20

Immersion in ASTM Oil 3, 168 h @ 150°C, DIN 53521, specimen not post cured

Hardness (piled S2 specimen)	Shore A	67
Modulus 100 %	MPa	9.7
Tensile strength	MPa	17.2
Elongation at break	%	190
Δ Hardness	Shore A	-8
Δ Modulus 100 %	%	+9
Δ Tensile strength	%	+2
Δ Elongation at break	%, rel.	-8
Δ Weight	%	+15
Δ Volume	%	+22

More information on this topic:

[Non black fillers in HNBR \(peroxide cured\)](#)

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.