



MACHINERY and EQUIPMENT

Appliance, Gasket, light-colored

Washing machine gasket

40 Shore A, EPDM, sulfur cure

Guide formulations of HOFFMANN MINERAL	M 612.0	with silica		without silica	
		21	16	14	9
Vistalon 3666		175.00	175.00	175.00	175.00
Stearic acid		1.00	1.00	1.00	1.00
Zinkoxyd aktiv		5.00	5.00	5.00	5.00
Aflux S)*		3.00	3.00	3.00	3.00
Diethylene glycol		3.00	3.00	3.00	3.00
Silanogran PV		4.80	4.80	4.80	4.80
SILLIKOLLOID P 87		100.00	---	150.00	---
SILFIT Z 91		---	100.00	---	150.00
Perkasil KS 300-pd		25.00	25.00	---	---
Kronos 2222		9.00	9.00	9.00	9.00
Corax N 550/30		0.35	0.35	0.35	0.35
Process Oil P 460 (ex Sunpar 2280)		25.00	25.00	25.00	25.00
Rhenogran MBT-80		2.40	2.40	2.40	2.40
Sulfur		0.70	0.70	0.70	0.70
Rhenogran CLD-80		1.20	1.20	1.20	1.20
Rhenocure TP/S		3.60	3.60	3.60	3.60
Total phr		359.05	359.05	384.05	384.05
Density	g/cm ³	1.19	1.19	1.24	1.24

)* No longer available. Recommended: Aflux 37

The replacement of precipitated silica can be realized without negatively affecting the mechanical properties. The basic properties of the compounds with SILFIT Z 91 and SILLIKOLLOID P 87 are comparable (slightly increased tensile moduli with SILFIT Z 91).

The very bright and neutral color of SILFIT Z 91 enables lower titanium dioxide and carbon black loading.

A further benefit of SILFIT Z 91 is the reduction or total elimination of filler induced mold fouling during the injection.



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			M 612.0			
Mooney Viscosity						
ML (1+4) 120°C	DIN 53523, T3	MU	42	44	38	41
Mooney Scorch						
ML (5 MU) 120°C	DIN 53523, T4	min	7.6	7.4	7.8	7.2
Rotorless curemeter, 180°C						
Mmin	DIN 53529, T3	Nm	0.060	0.058	0.056	0.053
Mmax	DIN 53529, T3	Nm	0.276	0.264	0.276	0.259
t ₅	DIN 53529, T3	min	0.48	0.50	0.44	0.45
t ₉₀	DIN 53529, T3	min	2.33	2.16	2.42	1.98
Physical properties						
Press cure 5 min @ 180°C						
Hardness (piled S2)	DIN ISO 7619-1	Shore A	39	39	42	40
Modulus 50 %	DIN 53504, S2	MPa	0.61	0.59	0.67	0.63
Modulus 100 %	DIN 53504, S2	MPa	0.9	0.9	1.1	1.0
Modulus 200 %	DIN 53504, S2	MPa	1.6	1.6	2.0	2.1
Modulus 300 %	DIN 53504, S2	MPa	2.3	2.5	2.8	3.3
Modulus 500 %	DIN 53504, S2	MPa	3.8	4.3	4.6	5.8
Tensile strength	DIN 53504, S2	MPa	13.9	13.5	14.1	12.1
Elongation at break	DIN 53504, S2	%	860	855	855	810
Rebound	DIN 53512	%	58	61	57	60
Tear resistance	DIN ISO 34-1, A	N/mm	8.5	9.7	9.6	9.4
Compression set	DIN ISO 815, B					
24 h @ 70°C, 25 % deflection		%	16.3	16.2	16.6	15.6
24 h @ 100°C, 25 % deflection		%	36.0	34.6	35.2	34.4
Color						
L*	ISO 7724		54.8	55.4	54.5	54.8
a*	ISO 7724		-1.7	-1.5	-1.7	-1.6
b*	ISO 7724		-0.6	-3.2	-1.4	-3.2



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Air aging, 72 h @ 120°C, DIN 53508					
Hardness (piled S2)	Shore A	49	48	49	47
Δ Hardness	Shore A	+10	+9	+7	+7
Air aging, 168 h @ 120°C, DIN 53508					
Hardness (piled S2)	Shore A	50	48	51	50
Modulus 50 %	MPa	1.0	0.9	1.0	0.9
Modulus 100 %	MPa	1.7	1.6	1.9	1.9
Modulus 200 %	MPa	3.4	3.6	4.0	4.6
Modulus 300 %	MPa	4.9	5.4	5.5	6.8
Modulus 500 %	MPa	8.6	8.7	8.8	---
Tensile strength	MPa	10.1	9.3	9.3	8.5
Elongation at break	%	570	520	535	390
Rebound	%	53	62	60	61
Tear resistance		5.2	4.2	4.7	3.2
Δ Hardness	Shore A	+11	+9	+9	+10
Δ Modulus 50 %	%	+57	+49	+55	+49
Δ Modulus 100 %	%	+86	+82	+79	+86
Δ Modulus 200 %	%	+112	+120	+103	+121
Δ Modulus 300 %	%	+113	+115	+95	+105
Δ Modulus 500 %	%	+130	+100	+89	---
Δ Tensile strength	%	-28	-31	-34	-30
Δ Elongation at break	%, rel.	-34	-39	-37	-52
Δ Rebound	%, rel.	+7	+2	+5	+2
Δ Tear resistance	%	-39	-57	-51	-67

More information on this topic

[Silfit Z 91 in Grey-colored Washing Machine Gaskets](#)

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