



SPECIAL TOPICS

Silicone rubber compounds with Aktisil Q

Curing agent "2,5-Bis-(t-butylperoxy)-2,5-dimethylhexane"

40-75 Shore A, Q, peroxide cure

Guide formulations of HOFFMANN MINERAL	M 608.5	18	19	20	21	22
Elastosil R 401/40		100.0	100.0	100.0	100.0	100.0
AKTISIL Q		---	25.0	50.0	75.0	100.0
Elastosil AUX Curing Agent C6		1.2	1.2	1.2	1.2	1.2
Total phr		101.2	126.2	151.2	176.2	201.2
Density	g/cm ³	1.12	1.26	1.38	1.48	1.56

Physical properties

Press cure 5 min @ 165°C

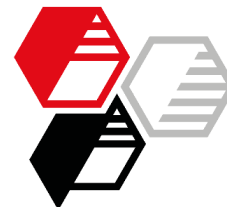
Hardness	DIN ISO 7619-1	Shore A	38	47	55	64	72
Modulus 100 %	DIN 53504, S2	MPa	0.7	1.2	1.7	2.6	3.4
Tensile strength	DIN 53504, S2	MPa	10.7	9.6	8.8	8.2	8.0
Elongation at break	DIN 53504, S2	%	800	610	430	315	235
Rebound	DIN 53512	%	40	50	50	46	45
Tear resistance	DIN ISO 34-1, A	N/mm	11.5	14.0	3.7	2.0	1.4
Compression set 24 h @ 175°C	DIN ISO 815, B	%	35	24	24	23	25

Post cure 4 h @ 200°C

Hardness		Shore A	40	48	57	66	74
Modulus 100 %		MPa	0.7	1.1	1.8	2.5	3.2
Tensile strength		MPa	11.2	8.8	7.5	6.8	6.7
Elongation at break		%	860	585	435	300	230
Rebound		%	53	52	49	45	42
Tear resistance		N/mm	12.2	12.8	4.2	2.3	1.6
Compression set 24 h @ 175°C		%	24	16	17	18	21

The influence of post-cure in association with Curing Agent C6 may be diminished by increasing the cure temperature of 165°C up to 180°C.

By this measure, the other properties should not be influenced unfavourable.



	M 608.5	18	19	20	21	22
Immersion in reference oil IRM 903, 72 h @ 150°C, post cured specimen						
Δ Hardness	Shore A	-22	-22	-25	-26	-27
Δ Modulus 100 %	%	-4	+6	+2	-2	+8
Δ Tensile strength	%	-72	-41	-24	-16	-15
Δ Elongation at break	%, rel.	-55	-40	-21	-7	-11
Δ Weight	%	+52	+39	+31	+25	+22
Δ Volume	%	+65	+55	+47	+41	+38

Without post-cure, AKTISIL Q attains a marginally higher increase of volume and weight of about 1 to 2 %.

More information on this topic:

[Neuburg Siliceous Earth in High Consistency Silicone Rubber](#)

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.