

ELECTRICAL APPLICATION

Cable insulation Aktifit VM and alternatives

70 Shore A, EPDM, peroxide cure

			Aktifit VM	Gloxil bright VM	Aktisil VM 56	Aktisil VM 56/89	Aktisil Q
Guide formulations of HOFFMANN MINERAL	M 717.0		8	3	5	6	7
Keltan 3973			130.0	130.0	130.0	130.0	130.0
Stearic acid			1.0	1.0	1.0	1.0	1.0
Zinkoxyd aktiv			5.0	5.0	5.0	5.0	5.0
Paraffin wax 54/56 (Hywax 5405)			4.0	4.0	4.0	4.0	4.0
AKTIFIT VM			200.0	---	---	---	---
GLOXIL bright VM			---	200.0	---	---	---
AKTISIL VM 56			---	---	200.0	---	---
AKTISIL VM 56/89			---	---	---	200.0	---
AKTISIL Q			---	---	---	---	200.0
Process Oil P 460			15.0	15.0	15.0	15.0	15.0
Vulkanox HS/LG			1.0	1.0	1.0	1.0	1.0
Vulkanox MB2/MG-C			0.5	0.5	0.5	0.5	0.5
TAC/GR 50			2.0	2.0	2.0	2.0	2.0
Perkadox 14-40B-pd-s			6.0	6.0	6.0	6.0	6.0
Total phr			364.5	364.5	364.5	364.5	364.5

Mooney Viscosity

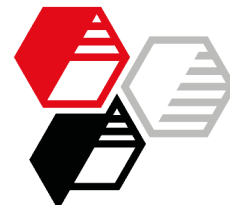
ML (1+4) 100°C	DIN ISO 289-1	MU	65	61	60	57	53
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Mooney Scorch

ML (5 MU) 120°C	DIN ISO 289-2	min	23	32	17	25	34
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Rotorless curemeter, 180°C

t ₅	DIN 53529, T3	min	0.4	0.4	0.4	0.4	0.4
t ₉₀	DIN 53529, T3	min	5.2	5.3	4.3	4.6	4.9



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	M 717.0		8	3	5	6	7

Physical properties**Cure @ 180°C**

			6 min	6 min	5 min	5 min	5 min
Hardness	DIN ISO 48-4	Shore A	72	71	71	70	69
Modulus 100 %	DIN 53504, S2	MPa	6.4	6.8	6.3	5.8	5.2
Tensile strength	DIN 53504, S2	MPa	13.4	14.8	13.5	13.7	10.8
Elongation at break	DIN 53504, S2	%	189	190	220	224	212
Rebound	DIN 53512	%	58	58	56	58	62
Tear resistance	DIN ISO 34-1, A	N/mm	3.3	2.9	3.9	3.9	3.3
Tear resistance	DIN ISO 34-1, B	N/mm	12	11	13	13	11
Compression set 70 h @ 150°C	DIN ISO 815-1, B	%	19	15	21	16	11

Air aging, 168 h @ 135°C ISO 188, D

Hardness	Shore A	74	74	75	74	71
Modulus 100 %	MPa	7.4	7.7	8.2	7.1	5.7
Tensile strength	MPa	14.0	15.5	15.3	15.1	11.7
Elongation at break	%	168	167	174	192	191
Δ Hardness	Shore A	+2	+3	+4	+4	+2
Δ Modulus 100 %	%	+15	+13	+30	+23	+11
Δ Tensile strength	%	+4.5	+4.7	+13	+10	+8.3
Δ Elongation at break	%, rel.	-11	-12	-21	-15	-10

Volume resistivity DIN EN IEC 62631-3-1

Original	Ω cm	1.7 x 10 ¹⁶	8.0 x 10 ¹⁵	2.2 x 10 ¹⁵	2.5 x 10 ¹⁵	1.6 x 10 ¹⁵
Original after relaxation 2 h @ 70°C	Ω cm	2.0 x 10 ¹⁶	6.6 x 10 ¹⁵	3.0 x 10 ¹⁵	2.8 x 10 ¹⁵	1.7 x 10 ¹⁵
Immersion in deion. water @ 70°C	7 d Ω cm	2.6 x 10 ¹⁵	3.5 x 10 ¹⁵	3.9 x 10 ¹⁴	6.5 x 10 ¹⁴	9.5 x 10 ¹⁴
	14 d Ω cm	2.8 x 10 ¹⁵	3.3 x 10 ¹⁵	3.7 x 10 ¹⁴	6.3 x 10 ¹⁴	9.5 x 10 ¹⁴
	28 d Ω cm	2.2 x 10 ¹⁵	3.5 x 10 ¹⁵	3.4 x 10 ¹⁴	6.0 x 10 ¹⁴	9.2 x 10 ¹⁴

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