CONSTRUCTION INDUSTRY
Profile, solid, light-colored

Building profile white (similar to RAL 9002)
very good extrudability, excellent compression set
65 Shore A, EPDM, peroxide cure
Start formulation RAL GZ 716/1 B/II and DIN 7863

		EPDM crystalline		EPDM amorphous	
	peroxide	**3/3**	**2/2**	**3/3**	**2/2**
Guide formulations of HOFFMANN MINERAL	M 612.10	4	9	7	2
Keltan 778Z)*		100.00	100.00	---	---
Keltan 8340A)**		---	---	100.00	100.00
Zinkoxyd aktiv		5.00	5.00	5.00	5.00
Stearic acid		0.50	0.50	0.50	0.50
Vulkanox HS/LG		0.75	0.75	0.75	0.75
Lipoxol 3000		2.00	2.00	2.00	2.00
Kronos 2222		15.00	15.00	15.00	15.00
Kezadol GR		10.00	10.00	10.00	10.00
Aflux 42		2.00	2.00	2.00	2.00
Trigonox 29-40B-pd		3.00	2.00	3.00	2.00
Perkadox 14-40B-pd		3.00	2.00	3.00	2.00
Rhenofit TRIM/S		1.00	1.00	1.00	1.00
Primol 352		95.00	70.00	70.00	70.00
AKTIFIT VM		400.00	300.00	300.00	300.00
Total phr		637.25	510.25	512.25	510.25
Density	g/cm³	1.60	1.55	1.55	1.55

)* No longer available. Recommended: Keltan 5470C
)** No longer available. Recommended: Keltan 8550C

In practice, light stabilizers have to be added to the formulation, e. g. a combination of Chimassorb 944 LD and Tinuvin 123.

Mooney Viscosity						
ML (1+4) 120°C	DIN 53523, T3	MU	50	47	57	56
Mooney Scorch						
ML (5 MU) 120°C	DIN 53523, T4	min	4.4	5.4	5.1	5.6
Rotorless curemeter, 180°C						
Mmin	DIN 53529, T3	Nm	0.081	0.082	0.114	0.113
Mmax	DIN 53529, T3	Nm	0.495	0.459	0.648	0.578
t_5	DIN 53529, T3	min	0.22	0.25	0.24	0.24
t_{90}	DIN 53529, T3	min	3.99	3.66	3.87	4.02

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			EPDM crystalline		EPDM amorphous			
		peroxide	3/3	2/2	3/3	2/2		
		M 612.10	4	9	7	2		
Schwabenthan extruder Polytest 30R, Ø 30								
Maximum extrusion speed for Garvey profile rating 4444								
Output		m/min	13,0	8,0	6,8	6,8		
							RAL	**DIN**
Physical properties							**GZ 716/1, BII**	**7863**
Press cure 5 min @ 180°C								
Hardness (piled S2)	DIN ISO 7619-1	Shore A	68	64	64	61	65 ± 5	
Δ Hardness 22 h @ -10°C		Shore A	+17	+20	+6	+9	≤ 25	≤ 10
Modulus 100 %	DIN 53504, S2	MPa	3.7	3.2	3.3	3.0		
Tensile strength	DIN 53504, S2	MPa	5.9	6.5	6.7	6.0	≥ 5	≥ 5
Elongation at break	DIN 53504, S2	%	250	300	250	250	≥ 200	≥ 200
Rebound	DIN 53512	%	37	43	43	43		
Tear resistance	DIN ISO 34-1, A	N/mm	5.1	7.9	5.0	5.4		
Compression set	**DIN ISO 815, B, cooling method A**							
22 h @ 23°C, 25 % deflection		%	17	18	7.2	9.7	≤ 35	≤ 15
24 h @ 100°C, 25 % deflection		%	15	18	9.4	11	≤ 50*	≤ 35
24 h @ 125°C, 25 % deflection		%	20	22	14	17	≤ 50*	
							* for 24 h / 70°C	
Air aging, 168 h @ 100°C, DIN 53508								
Hardness (piled S2)		Shore A	71	67	65	71		
Modulus 100 %		MPa	3.7	3.1	3.5	3.7		
Tensile strength		MPa	6.0	6.7	6.7	6.0		
Elongation at break		%	245	315	240	245	≥ 150	
Δ Hardness		Shore A	+3	+3	+1	+3	≤ 15	
Δ Modulus 100 %		%	+1	-4	+4	+1		
Δ Tensile strength		%	+1	+2	± 0	+1	≤ 25	
Δ Elongation at break		%, rel.	-2	+4	-4	-2		
							RAL 9002	
Color values							**gray white**	
L*	ISO 7724		88.0	88.4	88.4	89.6	86.7	
a*	ISO 7724		-0.15	-0.27	-0.19	-0.18	-1.1	
b*	ISO 7724		5.9	5.2	5.2	5.5	6.1	

More information on this topic:

Calcined Neuburg Siliceous Earth in White Coloured Building Profiles

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