SOLVAY
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Tecnoflon® VPL 45535

Very Low Temperature Peroxide Curable

Tecnoflon® VPL 45535 is a brand new generation very low temperature peroxide curable fluoroelastomer with outstanding low temperature flexibility (TR_{10} = 35 °C). Like all other Tecnoflon® peroxide curable grades, it exhibits excellent processability; moreover it needs very short post curing cycles.

Some of the basic properties of Tecnoflon® VPL 45535 are:

- Outstanding low temperature flexibility
- Excellent chemical resistance, especially in alcohol containing fuels
- Low post cure
- Superior mold flow
- Lack of mold fouling
- Excellent mold release

Tecnoflon® VPL 45535 can be used for compression, injection, injectioncompression and transfer molding of Orings, gaskets and seals. Tecnoflon® VPL 45535 can be combined with the cure system and other typical fluoroelastomer compounding ingredients. Mixing can be accomplished with two roll mills or internal mixers.

Tecnoflon® VPL 45535 can be extruded into hoses or profiles and can be calendered to make sheet stocks or belting. Finished goods may be produced by a variety of rubber processing methods.

Handling and safety

Normal care and precautions should be taken to avoid skin contact, eye contact and breathing of fumes. Smoking is prohibited in working areas. Wash hands before eating or smoking. For complete health and safety information, please refer to the material safety data sheet.

Basic characteristics of the raw polymer are as follows:

Property	Typical Value	Unit	Test Method
ML (1+10') at 121 °C	25	MU	ASTM D1646
Fluorine content	65	%	Solvay Internal Method – NMR
Specific gravity	1.85	g/cm^3	ASTM D792
Colour	Translucent		
Packaging / Form	Slabs		
Solubility	Ketones and esters		

Typical properties

Test Compound	Typical Value	Unit	Test Method
Tecnoflon® VPL 45535	100	phr	
Luperox® 101XL-45	2	phr	
Drimix® TAIC (75 %)	5	phr	
ZnO	5	phr	
N-990 MT Carbon Black	30	phr	

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Property	Typical Value	Unit	Test Method
Mooney viscosity ML (1+10') at 121 °C	28	MU	ASTM D1646
Mooney Scorch MS at 135 °C			ASTM D1646
MV	22	MU	
t_{15}	16	min	
MDR 6 min at 160 °C arc 0.5 °			ASTM D6601
Minimum torque	0.6	lb·in	
Maximum torque	29.1	lb·in	
t_{s2}	1.0	min	
t'_{50}	2.0	min	
t'_{90}	3.6	min	
Press cure: 6 min at 160 °C, post cure: 4 h at 230 °C			
100 % Modulus	6.7	MPa	ASTM D412C
Tensile strength	14.6	MPa	
Elongation at break	166	%	
Hardness	68	ShoreA	ASTM D2240
Compression set 25 % deformation, 70 h at 200 °C			ASTM D395 method B
O-ring #214	23	%	
Temperature retraction			ASTM D1329
TR_{10}	−35	°C	
TR_{30}	−33	°C	
TR_{50}	−32	°C	
TR_{70}	−30	°C	
Chemical resistance, **M15 (Fuel C/Methanol 85/15) 168 h at 23 °C**			ASTM D471
Δ Volume	12.5	%	

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