Tecnoflon® T 636/L

Low Temperature Curable Terpolymer

Tecnoflon® T 636/L is a low viscosity fluoroelastomer terpolymer designed to provide improved low temperature characteristics. Tecnoflon® T 636/L does not contain curatives: therefore the proper levels of Tecnoflon® FOR M1 and Tecnoflon® FOR M2 must be added to achieve the required properties. Tecnoflon® T 636/L is a lower viscosity version of Tecnoflon® T 636: please refer to Tecnoflon® T 636 Technical data sheet for data on chemical resistance: Tecnoflon® T 636/L exhibits the same excellent heat and chemical resistance expected from Tecnoflon® copolymers.

Some of the basic properties of Tecnoflon® 636/L are:

- Improved low temperature performance
- Good heat and chemical resistance
- Very low compression set
- Excellent mould release
- Lack of mould fouling
- Superior mould flow

Tecnoflon® T 636/L can be used for compression, injection and transfer molding of O-rings, diaphragms, gaskets, seals, moulded shapes or other items requiring improved low temperature performance. Tecnoflon® T 636/L 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® T 636/L can be extruded into hoses or profiles and can be calendered to make sheet stocks or belting. Finished goods can 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	22	MU	ASTM D1646
Fluorine content	65.5	%	Solvay Internal Method – NMR
Specific gravity	1.81	g/cm^3	ASTM D792
Colour	Translucent		
Packaging / Form	Slabs		
Solubility	Ketones and esters		

Typical properties

Test Compound	Typical Value	Unit	Test Method
Tecnoflon® T 636/L	100	phr	
Tecnoflon® FOR M1	4	phr	
Tecnoflon® FOR M2	1.5	phr	
MgO – DE	3	phr	
$Ca(OH)_2$	6	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	52	MU	ASTM D1646
Mooney Scorch MS 135 °C			ASTM D1646
MV	19	MU	
t_{15}	33.1	min	
ODR 12 min at 177 °C arc 3 °			ASTM D2084
Minimum torque	6.5	lb·in	
Maximum torque	109	lb·in	
t_{s2}	2.3	min	
t'_{90}	3.6	min	
MDR 6 min at 177 °C arc 0.5 °			ASTM D6601
Minimum torque	0.73	lb·in	
Maximum torque	19.7	lb·in	
t_{s2}	1.5	min	
t'_{50}	1.8	min	
t'_{90}	2.7	min	
Press cure: 10 min at 170 °C, post cure: (8+16) h at 250 °C			
100 % Modulus	6.9	MPa	ASTM D412C
Tensile strength	17.5	MPa	
Elongation at break	187	%	
Hardness	73	ShoreA	ASTM D2240
Compression set 25 % deformation, 70 h at 200 °C			ASTM D395 method B
O-ring #214	15	%	
6 mm buttons	12	%	
Temperature retraction			ASTM D1329
TR_{10}	−19	°C	
TR_{30}	−14	°C	
TR_{50}	−10	°C	

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