

Tecnoflon® FOR 5381

Cure Incorporated Terpolymer

Tecnoflon® FOR 5381 is a low viscosity cure incorporated fluoroelastomer terpolymer (FKM) with 68.5% fluorine content. Tecnoflon® FOR 5381 is well suited for all applications requiring better chemical resistance and/or long term heat resistance compared to fluoroelastomer copolymers. Tecnoflon® FOR 5381 contains proprietary cure system and special process aid providing superior processability for fast cycles and scorch safety.

Some of the basic properties of Tecnoflon® FOR 5381 are:

- Very good processability
- Excellent chemical resistance
- Low compression set
- Good heat resistance

Tecnoflon® FOR 5381 can be used for compression, injection and transfer moulding of shaft seals, valve stem seals, gaskets or any item requiring excellent chemical resistance. Tecnoflon® FOR 5381 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® FOR 5381 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	21	MU	ASTM D1646
Fluorine content	68.5	%	Solvay Internal Method – NMR
Specific gravity	1.88	g/cm ³	ASTM D792
Colour	Off white		
Packaging/Form	Slabs		
Solubility	Ketones and esters		

Typical properties

Test Compound	Typical Value	Unit	Test Method
Tecnoflon® FOR 5381	100	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	54	MU	ASTM D1646
Mooney Scorch MS 135 °C			ASTM D1646
MV	21	MU	
t ₁₅	30	min	
ODR 12 min at 177 °C arc 3°			ASTM D2084
Minimum torque	11	lb·in	
Maximum torque	100	lb·in	
t _{s2}	2.7	min	
t' ₉₀	3.9	min	
MDR 6 min at 177 °C arc 0.5°			ASTM D6601
Minimum torque	0.9	lb·in	
Maximum torque	24.5	lb·in	
t _{s2}	1.6	min	
t' ₅₀	1.9	min	
t' ₉₀	2.5	min	
Press cure: 10 min at 170 °C, post cure: (8+16) h at 250 °C			
100% Modulus	6.6	MPa	ASTM D412C
Tensile strength	15.0	MPa	
Elongation at break	200	%	
Hardness	80	ShoreA	ASTM D2240
Compression set			ASTM D395
25% deformation, 70 h at 200 °C			method B
O-ring #214	23	%	
6 mm buttons	20	%	
Temperature retraction			ASTM D1329
TR ₁₀	-13	°C	

www.solvay.com

SpecialtyPolymers.EMEA@solvay.com | Europe, Middle East and Africa

SpecialtyPolymers.Americas@solvay.com | Americas

SpecialtyPolymers.Asia@solvay.com | Asia Pacific



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