

Sarlink® TPV 3180

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

SARLINK® 3180 is a multi-purpose thermoplastic elastomer featuring excellent flex fatigue resistance, heat aging and resilience. SARLINK® 3180 is a high hardness grade for use in injection molded parts, sheet and profile extrusions such as weather-stripping. It can be also blow molded into boots and ducts.

General Information	
UL YellowCard	E54709-101009572
Features	Good heat aging resistance
	Fatigue resistance
	High hardness
	Elastic
Uses	Weather-resistant sealing strip
	Sheet
	Profile
Appearance	Opacity
Forms	Particle
Processing Method	Blow molding
	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.948	g/cm ³	ASTM D792
--	0.950	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A, 5 seconds, extruded	80		ASTM D2240, ISO 868
Shore A, 5 seconds, injection molding	84		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
Transverse flow: 100% strain	4.50	MPa	ASTM D412, ISO 37
Flow: 100% strain	6.70	MPa	ASTM D412, ISO 37
Tensile Strength			
Transverse flow: Fracture	9.38	MPa	ASTM D412
Flow: Fracture	8.48	MPa	ASTM D412
Transverse flow: Fracture	9.40	MPa	ISO 37

Flow: Fracture	8.50	MPa	ISO 37
Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	690	%	ASTM D412, ISO 37
Flow: Fracture	330	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
--	50.8	kN/m	ASTM D624
-- 1	51	kN/m	ISO 34-1
Compression Set			ASTM D395, ISO 815
23°C, 22 hr	32	%	ASTM D395, ISO 815
70°C, 22 hr	50	%	ASTM D395, ISO 815
125°C, 70 hr	65	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-9.0	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	17	%	ASTM D573
150°C, 168 hr	-8.0	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	9.0	%	ASTM D573
100% strain 135°C, 1000 hr	17	%	ISO 188
100% strain 150°C, 168 hr	9.0	%	ISO 188
Change in Ultimate Elongation in Air - Across Flow			ASTM D573, ISO 188
135°C, 1000 hr	-15	%	ASTM D573, ISO 188
150°C, 168 hr	-16	%	ASTM D573, ISO 188
Change in Durometer Hardness in Air			ASTM D573, ISO 188
Support a, 135°C, 1000 hr	0.0		ASTM D573, ISO 188
Support a, 150°C, 168 hr	2.0		ASTM D573, ISO 188
Change in Volume			
125°C, 70 hr, in IRM 903 oil	95	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	95	%	ISO 1817
Thermal	Nominal Value	Unit	Test Method
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.50 mm, Natural and Black Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity			
Capillary : 200°C	290	Pa · s	ASTM D3835
Capillary, @ 206/s : 200°C	290	Pa · s	ISO 11443
Injection	Nominal Value	Unit	
Rear Temperature	180 - 215	°C	

Middle Temperature	180 - 215	°C
Front Temperature	180 - 215	°C
Nozzle Temperature	187 - 220	°C
Processing (Melt) Temp	185 - 220	°C
Mold Temperature	10.0 - 55.0	°C
Back Pressure	0.100 - 1.00	MPa
Screw Speed	100 - 200	rpm
Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	180 - 200	°C
Cylinder Zone 2 Temp.	180 - 205	°C
Cylinder Zone 3 Temp.	187 - 210	°C
Cylinder Zone 4 Temp.	187 - 210	°C
Melt Temperature	195 - 215	°C
Die Temperature	195 - 215	°C
Take-Off Roll	20.0 - 50.0	°C
Extrusion instructions		
Screen Pack: 20 to 60 meshScrew: general purposeCompression Ratio: 3:1		
NOTE		

1.

Method B, right-angle specimen
(without cut)

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