

Sarlink® TPV 3170

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

SARLINK® 3170 is a multi-purpose thermoplastic elastomer featuring excellent compression set, heat resistance and weatherability. SARLINK® 3170 can be processed by injection molding, blow moulding or extrusion for applications such as seals, gaskets, chemical resistant hose and tube, heat resistant boots and bellows.

General Information	
UL YellowCard	E54709-101009571
Features	Good weather resistance
	Heat resistance, medium
Uses	Washer
	Pipe
	Pipe fittings
	Seals
	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	71		ASTM D2240, ISO 868
Shore A, 5 seconds, injection molding	75		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
Transverse flow: 100% strain	3.30	MPa	ASTM D412, ISO 37
Flow: 100% strain	5.10	MPa	ASTM D412, ISO 37
Tensile Strength			
Transverse flow: Fracture	7.72	MPa	ASTM D412
Flow: Fracture	6.70	MPa	ASTM D412, ISO 37
Transverse flow: Fracture	7.70	MPa	ISO 37

Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	670	%	ASTM D412, ISO 37
Flow: Fracture	300	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
--	42.0	kN/m	ASTM D624
-- ¹	42	kN/m	ISO 34-1
Compression Set			ASTM D395, ISO 815
23°C, 22 hr	25	%	ASTM D395, ISO 815
70°C, 22 hr	43	%	ASTM D395, ISO 815
125°C, 70 hr	63	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-8.0	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	10	%	ASTM D573
150°C, 168 hr	-4.0	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	5.0	%	ASTM D573
100% strain 135°C, 1000 hr	10	%	ISO 188
100% strain 150°C, 168 hr	5.0	%	ISO 188
Change in Ultimate Elongation in Air - Across Flow			ASTM D573, ISO 188
135°C, 1000 hr	-13	%	ASTM D573, ISO 188
150°C, 168 hr	-14	%	ASTM D573, ISO 188
Change in Durometer Hardness in Air			ASTM D573, ISO 188
Support a, 135°C, 1000 hr	-1.0		ASTM D573, ISO 188
Support a, 150°C, 168 hr	3.0		ASTM D573, ISO 188
Change in Volume			
125°C, 70 hr, in IRM 903 oil	120	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	120	%	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, @ 206/s			
200°C	290	Pa · s	ISO 11443
200°C	290	Pa · s	ASTM D3835
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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