

Sarlink® TPV X5780B

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

A highly engineered Thermoplastic Elastomer for use in demanding applications. Sarlink® X5780B4 is a UV stable medium hardness grade possessing exceptional tensile strength, superior compression set, chemical resistance and high temperature performance. It can be easily processed by extrusion, injection molding or blow molding for various applications such as glass run channels, waistbelts, weatherstrips, seals and other profiles and articles.

General Information	
UL YellowCard	E54709-101009563
Additive	UV stabilizer
Features	Low compressive deformability
	Good chemical resistance
	Heat resistance, high
	Medium hardness
Uses	Conveyor belt repair
	Seals
	Weather-resistant sealing strip
	Profile
Forms	Particle
Processing Method	Blow molding
	Extrusion
	Profile extrusion molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.968	g/cm ³	ASTM D792
--	0.970	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	82		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	6.80	MPa	ASTM D412, ISO 37
Tensile Strength			
Transverse flow: Fracture	10.0	MPa	ASTM D412, ISO 37

Flow: Fracture	9.03	MPa	ASTM D412
Flow: Fracture	9.00	MPa	ISO 37
Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	590	%	ASTM D412, ISO 37
Flow: Fracture	360	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
--	47.3	kN/m	ASTM D624
-- ¹	47	kN/m	ISO 34-1
Compression Set			ASTM D395, ISO 815
23°C, 22 hr	28	%	ASTM D395, ISO 815
70°C, 22 hr	41	%	ASTM D395, ISO 815
125°C, 70 hr	60	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-10	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	10	%	ASTM D573
150°C, 168 hr	-12	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	7.0	%	ASTM D573
100% strain 135°C, 1000 hr	10	%	ISO 188
100% strain 150°C, 168 hr	7.0	%	ISO 188
Change in Ultimate Elongation in Air - Across Flow			ASTM D573, ISO 188
135°C, 1000 hr	-19	%	ASTM D573, ISO 188
150°C, 168 hr	-20	%	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	-1.0		ASTM D573, ISO 188
Change in Volume			
125°C, 70 hr, in IRM 903 oil	73	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	73	%	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, Black Color)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
200°C	330	Pa · s	ISO 11443
200°C	330	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	

Drying Temperature	82.2	°C
Drying Time	3.0	hr
Rear Temperature	177 - 216	°C
Middle Temperature	177 - 216	°C
Front Temperature	177 - 216	°C
Nozzle Temperature	188 - 221	°C
Processing (Melt) Temp	182 - 221	°C
Mold Temperature	10.0 - 65.6	°C
Back Pressure	0.0689 - 1.03	MPa
Screw Speed	100 - 200	rpm
Screw L/D Ratio	20.0:1.0	

Extrusion	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	182 - 204	°C
Cylinder Zone 2 Temp.	182 - 204	°C
Cylinder Zone 3 Temp.	188 - 210	°C
Cylinder Zone 4 Temp.	188 - 210	°C
Melt Temperature	193 - 216	°C
Die Temperature	193 - 216	°C
Take-Off Roll	21.1 - 48.9	°C

Extrusion instructions

Screen Pack: 20 to 60 meshScrew: 3:1 Compression Ratio

NOTE

- Method B, right-angle specimen
(without cut)

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