Sarlink® TPV 5790B

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

A highly engineered Thermoplastic Elastomer for use in demanding applications. Sarlink® X5790B is a UV stable high 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	E54709-102203296
Additive	UV stabilizer
Features	Low compressive deformability High tensile strength Good chemical resistance Heat resistance, high High hardness
Uses	Conveyor belt repair Seals Weather-resistant sealing strip Profile
Appearance	Opacity
Forms	Particle
Processing Method	Blow molding Extrusion Profile extrusion molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.968	g/cm³	ASTM D792
--	0.970	g/cm³	ISO 1183
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240, ISO 868
Shaw A, 5 seconds, extruded	87		ASTM D2240, ISO 868
Shore A, 5 seconds, injection molding	89		ASTM D2240, ISO 868
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			
Transverse flow: 100% strain	6.50	MPa	ASTM D412, ISO 37
Flow: 100% strain	9.79	MPa	ASTM D412

Flow: 100% strain	9.80	MPa	ISO 37
Tensile Strength			ASTM D412, ISO 37
Transverse flow: Fracture	14.1	MPa	ASTM D412, ISO 37
Flow: Fracture	13.4	MPa	ASTM D412, ISO 37
Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	600	%	ASTM D412, ISO 37
Flow: Fracture	370	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
--	70.1	kN/m	ASTM D624
-- [1]	70	kN/m	ISO 34-1
Compression Set			ASTM D395, ISO 815
23°C, 22 hr	36	%	ASTM D395, ISO 815
70°C, 22 hr	49	%	ASTM D395, ISO 815
125°C, 70 hr	72	%	ASTM D395, ISO 815

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-7.0	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	14	%	ASTM D573
150°C, 168 hr	-13	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	10	%	ASTM D573
100% strain 135°C, 1000 hr	14	%	ISO 188
100% strain 150°C, 168 hr	10	%	ISO 188
Change in Ultimate Elongation in Air - Across Flow			ASTM D573, ISO 188
135°C, 1000 hr	-20	%	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	60	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	60	%	ISO 1817

Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
200°C	350	Pa·s	ISO 11443
200°C	350	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	
1.	Method B, right-angle specimen (without cut)

Recommended distributors for this material

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