



Sarlink® TPV 5780B

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

The Sarlink TPV 5700B series are highly engineered extrusion-grade thermoplastic vulcanizates with outstanding UV stability designed for demanding automotive interior and exterior sealing applications, including glass run channels, waistbelts, weather strips, seals and other profiles. Sarlink TPV 5780B is a medium hardness, medium density, high performance grade with low fogging and excellent color retention and elastic properties.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• UV Stabilizer		
Features	• Chemical Resistant • Good Processability • High Heat Resistance	• Low Compression Set • Medium Density • Medium Hardness	• Resilient • UV Resistant
Uses	• Automotive Applications • Belts/Belt Repair	• Profiles • Rubber Replacement	• Seals • Weatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• GM GMP.E/P.037	• MERCEDES BENZ MSAR 23 Type D	• MERCEDES BENZ MSAR 23 Type E
UL File Number	• QMFZ2.E54709		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Profile Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.970		ASTM D792
Density	0.970	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	653	psi	
Flow : 100% Strain	986	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	653	psi	
Flow : 100% Strain	986	psi	
Tensile Strength			ASTM D412
Across Flow : Break	1450	psi	
Flow : Break	1310	psi	
Tensile Stress			ISO 37
Across Flow : Break	1450	psi	
Flow : Break	1310	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	590	%	
Flow : Break	360	%	

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Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation			ISO 37
Across Flow : Break	590	%	
Flow : Break	360	%	
Tear Strength - Across Flow	270	lbf/in	ASTM D624
Tear Strength - Across Flow ²	268	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	28	%	
158°F, 22 hr	41	%	
257°F, 70 hr	60	%	
Compression Set			ISO 815
73°F, 22 hr	28	%	
158°F, 22 hr	41	%	
257°F, 70 hr	60	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	80		
Shore A, 5 sec, Injection Molded	82		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	80		
Shore A, 5 sec, Injection Molded	82		
Thermal	Nominal Value	Unit	Test Method
RTI Elec	122	°F	UL 746B
RTI Imp	122	°F	UL 746B
RTI Str	122	°F	UL 746B
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
275°F, 1000 hr	-10	%	
100% Strain, 275°F, 1000 hr	10	%	
302°F, 168 hr	-12	%	
100% Strain, 302°F, 168 hr	7.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-10	%	
100% Strain 275°F, 1000 hr	10	%	
302°F, 168 hr	-12	%	
100% Strain 302°F, 168 hr	7.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
275°F, 1000 hr	-19	%	
302°F, 168 hr	-20	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
275°F, 1000 hr	-19	%	
302°F, 168 hr	-20	%	
Change in Durometer Hardness in Air			ASTM D573
Shore A, 275°F, 1000 hr	1.0		
Shore A, 302°F, 168 hr	-1.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 275°F, 1000 hr	1.0		
Shore A, 302°F, 168 hr	-1.0		
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	73	%	ASTM D471

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Aging	Nominal Value	Unit	Test Method
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	73	%	ISO 1817
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, Black Color)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
392°F	330	Pa·s	ASTM D3835
392°F	330	Pa·s	ISO 11443

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr
Rear Temperature	350 to 420	°F
Middle Temperature	350 to 420	°F
Front Temperature	350 to 420	°F
Nozzle Temperature	370 to 430	°F
Processing (Melt) Temp	360 to 430	°F
Mold Temperature	50 to 150	°F
Back Pressure	10.0 to 150	psi
Screw Speed	100 to 200	rpm
Screw L/D Ratio	20.0:1.0	
Extrusion	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	360 to 400	°F
Cylinder Zone 2 Temp.	360 to 400	°F
Cylinder Zone 3 Temp.	370 to 410	°F
Cylinder Zone 4 Temp.	370 to 410	°F
Melt Temperature	380 to 420	°F
Die Temperature	380 to 420	°F
Take-Off Roll	70 to 120	°F

Extrusion Notes

Screen Pack: 20 to 60 mesh
Screw: 3:1 Compression Ratio

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method Ba, Angle (Unnicked)