

Teknor Apex Company - Thermoplastic Vulcanizate

Monday, January 7, 2019

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 5775B 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	EuropeLatin America	North America
Additive	 UV Stabilizer 		
Features	Chemical ResistantGood ProcessabilityHigh Heat Resistance	Low Compression SetMedium DensityMedium Hardness	Resilient
Uses	Automotive ApplicationsBelts/Belt Repair	 Profiles Rubber Replacement	SealsWeatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	 RoHS Compliant 		
Automotive Specifications	 CHRYSLER MS-AR-100 CO DAIMLER DBL 5562.30 CoI FORD WSS-M2D380-B1 GM GMP.E/P.057 GM QK 3523 L Color: Black GM Sarlink Color Color: Bla PSA Peugeot-Citroën B62 0 VAG VW501 23 Color: Black 	or: Black ck 300 version G Color: Black	
UL File Number	• QMFZ2.E54709		
Appearance	• Black		
Forms	 Pellets 		
Processing Method	Blow MoldingExtrusion	Injection MoldingProfile Extrusion	

ASTM & ISO Properties 1			
Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.970		ASTM D792
Density	0.970	g/cm³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow: 100% Strain	464	psi	
Flow: 100% Strain	711	psi	
Tensile Stress			ISO 37
Across Flow: 100% Strain	464	psi	
Flow: 100% Strain	711	psi	
Tensile Strength			ASTM D412
Across Flow : Break	1230	psi	
Flow : Break	1060	psi	
Tensile Stress			ISO 37
Across Flow : Break	1230	psi	
Flow : Break	1060	psi	

Revision Date: 4/9/2018

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Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation			ASTM D412
Across Flow : Break	590	%	
Flow : Break	340	%	
Tensile Elongation			ISO 37
Across Flow : Break	590	%	
Flow : Break	340	%	
Tear Strength - Across Flow	200	lbf/in	ASTM D624
Tear Strength - Across Flow ²	200	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	23	%	
158°F, 22 hr	32	%	
257°F, 70 hr	47	%	
Compression Set			ISO 815
73°F, 22 hr	23	%	
158°F, 22 hr	32	%	
257°F, 70 hr	47	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	72		
Shore A, 5 sec, Injection Molded	75		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	72		
Shore A, 5 sec, Injection Molded	75		
Thermal	Nominal Value	Unit	Test Method
RTI Elec	122	°F	UL 746
RTI Imp	122	°F	UL 746
RTI Str	122	°F	UL 746
Aging	Nominal Value	Unit	Test Method
	Nonnia value		rest wethou
Change in Tensile Strength in Air - Across Flow	Nonninai value		ASTM D573
Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr	-8.0	%	
275°F, 1000 hr	-8.0	%	
275°F, 1000 hr 100% Strain, 275°F, 1000 hr	-8.0 4.0	% %	
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr	-8.0 4.0 -10	% %	
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr	-8.0 4.0 -10	% % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow	-8.0 4.0 -10 2.0	% % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr	-8.0 4.0 -10 2.0	% % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr	-8.0 4.0 -10 2.0 -8.0 4.0	% % % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10	% % % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow	-8.0 4.0 -10 2.0 -8.0 4.0 -10	% % % % % % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0	% % % % % % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0	% % % % % % %	ASTM D573 ISO 188 ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr Change in Tensile Strain at Break in Air - Across Flow	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0	% % % % % % %	ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr Change in Tensile Strain at Break in Air - Across Flow 275°F, 1000 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0 -7.0 -11	% % % % % % %	ASTM D573 ISO 188 ASTM D573
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr Change in Tensile Strain at Break in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0	% % % % % % %	ASTM D573 ISO 188 ISO 188
275°F, 1000 hr 100% Strain, 275°F, 1000 hr 302°F, 168 hr 100% Strain, 302°F, 168 hr Change in Tensile Strength in Air - Across Flow 275°F, 1000 hr 100% Strain 275°F, 1000 hr 302°F, 168 hr 100% Strain 302°F, 168 hr Change in Ultimate Elongation in Air - Across Flow 275°F, 1000 hr 302°F, 168 hr Change in Tensile Strain at Break in Air - Across Flow 275°F, 1000 hr	-8.0 4.0 -10 2.0 -8.0 4.0 -10 2.0 -7.0 -11	% % % % % % %	ASTM D573 ISO 188 ASTM D573

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Aging	Nominal Value	Unit	Test Method
Change in Shore Hardness in Air			ISO 188
Shore A, 275°F, 1000 hr	3.0		
Shore A, 302°F, 168 hr	2.0		
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	88	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	88	%	ISO 1817
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, Black)	НВ		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
392°F	330	Pa·s	ISO 11443
392°F	220	Pa·s	ASTM D3835

Legal Statement

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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

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Notes

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

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² Method Ba, Angle (Unnicked)