Sarlink® TPV 4775B40

Teknor Apex Company - Thermoplastic Vulcanizate

Thursday, June 29, 2017

General Information

Product Description

The Sarlink TPV 4700 Series are high flow injection molding engineering grades with excellent UV resistance, elasticity, and surface aesthetics designed for demanding automotive applications including window encapsulation and exterior parts. Sarlink® TPV 4775B40 is a black, medium hardness, low density thermoplastic vulcanizate suited for injection molding applications that require superior flow properties.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• UV Stabilizer		
Features	• Chemical Resistant • Good Flexibility • Good Processability	• High Flow • High Heat Resistance • Low Compression Set	• Low Density • Low Specific Gravity • Medium Hardness
Uses	• Automotive Applications • Automotive Exterior Parts	• Automotive Window Encapsulation • Rubber Replacement	
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• CHRYSLER MS-AR-100 CMV Color: Black • DAIMLER DBL 5422 Color: Black	• DAIMLER DBL 5562.30 Color: Black • GM GMW15812P-TPV(EPDM+PP) Type 6M Color: Black	• GM QK 003522 Color: Black • HONDA Unspecified Color: Black
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.910		ASTM D792
Density	0.910	g/cm³	ISO 1183
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
Across Flow : 100% Strain	450	psi	
Flow : 100% Strain	508	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	450	psi	
Flow : 100% Strain	508	psi	
Tensile Strength			ASTM D412
Across Flow : Break	957	psi	
Flow : Break	870	psi	
Tensile Stress			ISO 37
Across Flow : Break	957	psi	
Flow : Break	870	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	490	%	
Flow : Break	410	%	
Tensile Elongation			ISO 37
Across Flow : Break	490	%	
Flow : Break	410	%	

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Elastomers	Nominal Value	Unit	Test Method
Tear Strength - Across Flow	190	lbf/in	ASTM D624
Tear Strength - Across Flow [2]	190	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	24	%	
158°F, 22 hr	36	%	
257°F, 70 hr	52	%	
Compression Set			ISO 815
73°F, 22 hr	24	%	
158°F, 22 hr	36	%	
257°F, 70 hr	52	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	74		
Shore A, 5 sec, Injection Molded	76		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	74		
Shore A, 5 sec, Injection Molded	76		

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
275°F, 1000 hr	-12	%	
100% Strain, 275°F, 1000 hr	5.0	%	
302°F, 168 hr	-22	%	
100% Strain, 302°F, 168 hr	2.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-12	%	
100% Strain 275°F, 1000 hr	5.0	%	
302°F, 168 hr	-22	%	
100% Strain 302°F, 168 hr	2.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
275°F, 1000 hr	-16	%	
302°F, 168 hr	-29	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
275°F, 1000 hr	-16	%	
302°F, 168 hr	-29	%	
Change in Durometer Hardness in Air			ASTM D573
Shore A, 275°F, 1000 hr	3.0		
Shore A, 302°F, 168 hr	1.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 275°F, 1000 hr	3.0		
Shore A, 302°F, 168 hr	1.0		
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	74	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	74	%	ISO 1817

Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
392°F	220	Pa·s	ISO 11443
392°F	220	Pa·s	ASTM D3835

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Legal Statement

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	

Notes

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

[2] Method Ba, Angle (Unnicked)

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