TEKNOR APEX

Sarlink® TPV 5790B

Teknor Apex Company - Thermoplastic Vulcanizate

Thursday, June 29, 2017

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 5790B is a higher 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 Hardness	• High Heat Resistance • High Tensile Strength • Low Compression Set	• Medium Density • Resilient
Uses	• Automotive Applications • Belts/Belt Repair	• Profiles • Rubber Replacement	• Seals • Weatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• CHRYSLER MS-AR-100 EGV Color: Black • FORD Unspecified Color: Black	• GM GMP.E/P.037 Color: Black • GM GMW15812P-TPV(EPDM+PP) Type 8E Color: Black	• HONDA Unspecified Color: Black
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Profile Extrusion	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
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	943	psi	
Flow : 100% Strain	1420	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	943	psi	
Flow : 100% Strain	1420	psi	
Tensile Strength			ASTM D412
Across Flow : Break	2050	psi	
Flow : Break	1940	psi	
Tensile Stress			ISO 37
Across Flow : Break	2050	psi	
Flow : Break	1940	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	600	%	
Flow : Break	370	%	

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Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation			ISO 37
Across Flow : Break	600	%	
Flow : Break	370	%	
Tear Strength - Across Flow	400	lbf/in	ASTM D624
Tear Strength - Across Flow [2]	400	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	36	%	
158°F, 22 hr	49	%	
257°F, 70 hr	72	%	
Compression Set			ISO 815
73°F, 22 hr	36	%	
158°F, 22 hr	49	%	
257°F, 70 hr	72	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	87		
Shore A, 5 sec, Injection Molded	89		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	87		
Shore A, 5 sec, Injection Molded	89		

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
275°F, 1000 hr	-7.0	%	
100% Strain, 275°F, 1000 hr	14	%	
302°F, 168 hr	-13	%	
100% Strain, 302°F, 168 hr	10	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-7.0	%	
100% Strain 275°F, 1000 hr	14	%	
302°F, 168 hr	-13	%	
100% Strain 302°F, 168 hr	10	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
275°F, 1000 hr	-20	%	
302°F, 168 hr	-20	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
275°F, 1000 hr	-20	%	
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)	60	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	60	%	ISO 1817

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, BK)	HB		UL 94

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Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
392°F	350	Pa·s	ISO 11443
392°F	350	Pa·s	ASTM D3835

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	

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)

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