

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

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 5755B 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 EastAsia Pacific	Europe Latin America	North America
Additive	UV Stabilizer		
Features	 Chemical Resistant Good Processability High Heat Resistance	 Low Compression Set Low Hardness Medium Density	Medium Hardness
Uses	Automotive ApplicationsBelts/Belt Repair	 Profiles Rubber Replacement	 Seals Weatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	 BMW Mini/BMW Unspecified Color: Black CHRYSLER MS-AR-100 AGV Color: Black FORD WSS-M2D378-B1 Color: Black 	 GM GMP.E/P.109 Color: Black GM GMW15812P-TPV(EPDM +PP) Type 4E Color: Black HONDA Unspecified Color: Black 	VAG VW501 23 Color: Black
UL File Number	• QMFZ2.E54709		
Appearance	• Black		
Forms	• Pellets		
Processing Method	Blow MoldingExtrusion	 Injection Molding Profile Extrusion	

ASTM & ISO Properties 1			
Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.968	g/cm³	ASTM D792
Density	0.970	g/cm³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow: 100% Strain	1.90	MPa	
Flow: 100% Strain	3.10	MPa	
Tensile Stress			ISO 37
Across Flow: 100% Strain	1.90	MPa	
Flow: 100% Strain	3.10	MPa	
Tensile Strength			ASTM D412
Across Flow: Break	5.20	MPa	
Flow: Break	4.60	MPa	
Tensile Stress			ISO 37
Across Flow: Break	5.20	MPa	
Flow: Break	4.60	MPa	

Revision Date: 8/3/2018

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Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation			ASTM D412
Across Flow: Break	550	%	
Flow: Break	280	%	
Tensile Elongation			ISO 37
Across Flow: Break	550	%	
Flow: Break	280	%	
Tear Strength - Across Flow	21.0	kN/m	ASTM D624
Tear Strength - Across Flow ²	21.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	17	%	
70°C, 22 hr	27	%	
125°C, 70 hr	42	%	
Compression Set			ISO 815
23°C, 22 hr	17	%	
70°C, 22 hr	27	%	
125°C, 70 hr	42	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	55		
Shore A, 5 sec, Injection Molded	58		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	55		
Shore A, 5 sec, Injection Molded	58		
Thermal	Nominal Value	Unit	Test Method
RTI Elec	50.0	°C	UL 746B
RTI Imp	50.0	°C	UL 746B
RTI Str	50.0	°C	UL 746B
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr			ASTM D573
133 C, 1000 III	-6.0	%	ASTM D573
100% Strain, 135°C, 1000 hr	-6.0 3.0		ASTM D573
		%	ASTM D573
100% Strain, 135°C, 1000 hr	3.0	% %	ASTM D573
100% Strain, 135°C, 1000 hr 150°C, 168 hr	3.0 -12	% %	ASTM D573 ISO 188
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr	3.0 -12	% % % %	
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow	3.0 -12 -2.0	% % % %	
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr	3.0 -12 -2.0	% % % %	
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr	3.0 -12 -2.0 -6.0 3.0	% % % % %	
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr	3.0 -12 -2.0 -6.0 3.0 -12	% % % % %	
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr	3.0 -12 -2.0 -6.0 3.0 -12	% % % % % % %	ISO 188
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % % % % % % % % %	ISO 188
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow 135°C, 1000 hr	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % % % % % % % % %	ISO 188
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow 135°C, 1000 hr 150°C, 168 hr	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % %	ISO 188 ASTM D573
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow 135°C, 1000 hr 150°C, 168 hr Change in Tensile Strain at Break in Air - Across Flow	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % %	ISO 188 ASTM D573
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow 135°C, 1000 hr 150°C, 168 hr Change in Tensile Strain at Break in Air - Across Flow 135°C, 1000 hr	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % %	ISO 188 ASTM D573
100% Strain, 135°C, 1000 hr 150°C, 168 hr 100% Strain, 150°C, 168 hr Change in Tensile Strength in Air - Across Flow 135°C, 1000 hr 100% Strain 135°C, 1000 hr 150°C, 168 hr 100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow 135°C, 1000 hr 150°C, 168 hr Change in Tensile Strain at Break in Air - Across Flow 135°C, 1000 hr 150°C, 168 hr	3.0 -12 -2.0 -6.0 3.0 -12 -2.0	% % % % % % % % % % % %	ISO 188 ASTM D573 ISO 188

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Aging	Nominal Value	Unit	Test Method
Change in Shore Hardness in Air			ISO 188
Shore A, 135°C, 1000 hr	1.0		
Shore A, 150°C, 168 hr	-2.0		
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	99	%	ASTM D471
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	99	%	ISO 1817
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.5 mm, Black)	НВ		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
200°C	315	Pa·s	ASTM D3835
		Pa·s	ISO 11443

Legal Statement

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Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	82	°C	
Drying Time	3.0	hr	
Rear Temperature	177 to 216	°C	
Middle Temperature	177 to 216	°C	
Front Temperature	177 to 216	°C	
Nozzle Temperature	188 to 221	°C	
Processing (Melt) Temp	182 to 221	°C	
Mold Temperature	10 to 66	°C	
Back Pressure	0.0689 to 1.03	MPa	
Screw Speed	100 to 200	rpm	
Screw L/D Ratio	20.0:1.0		
Extrusion	Nominal Value	Unit	
Drying Temperature	82	°C	
Drying Time	3.0	hr	
Cylinder Zone 1 Temp.	182 to 204	°C	
Cylinder Zone 2 Temp.	182 to 204	°C	
Cylinder Zone 3 Temp.	188 to 210	°C	
Cylinder Zone 4 Temp.	188 to 210	°C	
Melt Temperature	193 to 216	°C	
Die Temperature	193 to 216	°C	
Take-Off Roll	21 to 49	°C	
Extrusion Notes			

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

Notes

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

² Method Ba, Angle (Unnicked)

Teknor Apex Company - Thermoplastic Vulcanizate

Teknor Apex Company Corporate Headquarters

In U.S. for Vinyls, TPEs, Colorants,

Engineered Thermoplastics (Chem Polymer) 505 Central Avenue Pawtucket, Rhode Island 02861 U.S.

Phone: 401-725-8000 Fax: 401-725-8095 Toll Free (U.S. only) 800-556-3864

www.teknorapex.com info@teknorapex.com Teknor Apex B.V.

Brightlands Chemelot Campus Umonderbaan No. 78 Ping Sheng Road

6167 RD Geleen, Netherlands

Phone: +31 46 7020 950 Fax: +31 46 7020 990

www.teknorapex.com tpe@teknorapex.com Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.

Suzhou Industrial Park Jiangsu, China 215126

Phone: (86) 512-6287-1550 Fax: (86) 512-6288-8371

www.teknorapex.com infotaap@teknoapex.com Teknor Apex Asia Pacific PTE. LTD.

41 Shipyard Road

Singapore 628134

Phone: (65) 6265-2544 Fax: (65) 6265-1821

www.teknorapex.com infotaap@teknorapex.com

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