

Sarlink® TPV 4755B42

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

General Information

Product Description

The Sarlink TPV 4700 Series are very 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 4755B42 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
Features	• Chemical Resistant • Good Processability • High Flow	• Low Compression Set • Low Density • Low Specific Gravity	• Medium Hardness • Resilient
Uses	• Automotive Applications • Automotive Exterior Parts	• Automotive Window Encapsulation • Rubber Replacement	
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• DAIMLER DBL 5422 Color: Black • DAIMLER DBL 5562.30 Color: Black • FORD WSD-M2D378-A1 Color: Black	• FORD WSS-M2D378-B1 Color: Black • GM QK 003513 Color: Black • VAG VW501 23 Color: Black	• VOLKSWAGEN VW 50180 Color: Black
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.908	g/cm ³	ASTM D792
Density	0.910	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	1.80	MPa	
Flow : 100% Strain	2.70	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	1.80	MPa	
Flow : 100% Strain	2.70	MPa	
Tensile Strength			ASTM D412
Across Flow : Break	5.00	MPa	
Flow : Break	4.30	MPa	
Tensile Stress			ISO 37
Across Flow : Break	5.00	MPa	
Flow : Break	4.30	MPa	
Tensile Elongation			ASTM D412
Across Flow : Break	500	%	
Flow : Break	390	%	
Tensile Elongation			ISO 37
Across Flow : Break	500	%	
Flow : Break	390	%	
Tear Strength - Across Flow	19.3	kN/m	ASTM D624

Revision Date: 9/29/2023

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Elastomers	Nominal Value	Unit	Test Method
Tear Strength - Across Flow ²	19.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	19	%	
70°C, 22 hr	28	%	
125°C, 70 hr	43	%	
Compression Set			ISO 815
23°C, 22 hr	19	%	
70°C, 22 hr	28	%	
125°C, 70 hr	43	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	54		
Shore A, 5 sec, Injection Molded	56		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	54		
Shore A, 5 sec, Injection Molded	56		
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
135°C, 1000 hr	-2.0	%	
100% Strain, 135°C, 1000 hr	7.0	%	
150°C, 168 hr	-6.0	%	
100% Strain, 150°C, 168 hr	-1.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	-2.0	%	
100% Strain 135°C, 1000 hr	7.0	%	
150°C, 168 hr	-6.0	%	
100% Strain 150°C, 168 hr	-1.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	-4.0	%	
150°C, 168 hr	-2.0	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	-4.0	%	
150°C, 168 hr	-2.0	%	
Change in Durometer Hardness in Air			ASTM D573
Shore A, 135°C, 1000 hr	2.0		
Shore A, 150°C, 168 hr	-2.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 135°C, 1000 hr	2.0		
Shore A, 150°C, 168 hr	-2.0		
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	90	%	ASTM D471
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	90	%	ISO 1817
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity			
Capillary : 200°C	220	Pa·s	ASTM D3835
Capillary @ 206/s : 200°C	220	Pa·s	ISO 11443

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Desiccant Dryer	82	°C
Drying Time - Desiccant Dryer	3.0 to 4.0	hr
Dew Point - Desiccant Dryer	-40	°C
Suggested Shot Size	25 to 50	%
Rear Temperature	180 to 210	°C
Middle Temperature	190 to 220	°C
Front Temperature	200 to 240	°C
Nozzle Temperature	210 to 240	°C
Processing (Melt) Temp	210 to 240	°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	25.0:1.0	

Notes

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

² Method Ba, Angle (Unnicked)

Teknor Apex Company Corporate Headquarters	Teknor Apex B.V.	Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.	Teknor Apex Asia Pacific PTE. LTD.
<i>In U.S. for Vinyls, TPEs, Colorants,</i>	Brightlands Chemelot Campus Umonderbaan 22	No. 78 Ping Sheng Road	41 Shipyard Road
<i>Engineered Thermoplastics (Chem Polymer)</i> 505 Central Avenue Pawtucket, Rhode Island 02861 U.S.	6167 RD Geleen, Netherlands	Suzhou Industrial Park Jiangsu, China 215126	Singapore 628134
Phone: 401-725-8000 Fax: 401-725-8095 Toll Free (U.S. only) 800-556-3864	Phone: +31 46 7020 950 Fax: +31 46 7020 990 www.teknorapex.com tpe@teknorapex.com	Phone: (86) 512-6287-1550 Fax: (86) 512-6288-8371 www.teknorapex.com infotaap@teknorapex.com	Phone: (65) 6265-2544 Fax: (65) 6265-1821 www.teknorapex.com infotaap@teknorapex.com
www.teknorapex.com info@teknorapex.com			

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