

Sarlink® TPV 3140

Teknor Apex Company - Thermoplastic Vulcanizate

Friday, October 6, 2023

General Information

Product Description

SARLINK® TPV 3100 series are engineered materials designed primarily for general purpose, automotive and industrial applications requiring a good balance of thermal, mechanical, and physical properties. SARLINK® 3140, available in NAT and BLK, is a low hardness, low density, multi-purpose thermoplastic vulcanizate that can be processed by injection molding, blow molding or extrusion for applications such as grips, seals, gaskets, profiles, hose & tubes, bellows, and other articles.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Good Adhesion • Good Flexibility • Good Moldability • Good Processability	• Good Surface Finish • Good Weather Resistance • High Elasticity • Low Density • Low Hardness	• Low Specific Gravity • Medium Heat Resistance • Resilient
Uses	• Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Diaphragms	• Gaskets • Industrial Applications • O-rings • Plugs • Profiles	• Rubber Replacement • Seals • Weatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• BMW Unspecified Color: Black • DAIMLER DBL 5562.30 Color: Black • GM QK 003511 Color: Black • GM QK 003511 Color: Natural • PSA Peugeot-Citroën B62 0300 version G Color: Black • VAG VW501 23 Color: Black • VAG VW501 79 Color: Black • VOLKSWAGEN VW 50180 Color: Black		
UL File Number	• QMFZ2.E54709		
Appearance	• Black	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.928	g/cm ³	ASTM D792
Density	0.930	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	1.20	MPa	
Flow : 100% Strain	2.50	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	1.20	MPa	
Flow : 100% Strain	2.50	MPa	
Tensile Strength			ASTM D412
Across Flow : Break	4.40	MPa	
Flow : Break	2.50	MPa	

Revision Date: 4/9/2018

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Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
Across Flow : Break	4.40	MPa	
Flow : Break	2.50	MPa	
Tensile Elongation			ASTM D412
Across Flow : Break	600	%	
Flow : Break	210	%	
Tensile Elongation			ISO 37
Across Flow : Break	600	%	
Flow : Break	210	%	
Tear Strength - Across Flow	15.9	kN/m	ASTM D624
Tear Strength - Across Flow ²	16.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	18	%	
70°C, 22 hr	31	%	
125°C, 70 hr	52	%	
Compression Set			ISO 815
23°C, 22 hr	18	%	
70°C, 22 hr	31	%	
125°C, 70 hr	52	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	41		
Shore A, 5 sec, Injection Molded	46		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	41		
Shore A, 5 sec, Injection Molded	46		
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			ASTM D573
135°C, 1000 hr	12	%	
100% Strain, 135°C, 1000 hr	5.0	%	
150°C, 168 hr	11	%	
100% Strain, 150°C, 168 hr	6.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	12	%	
100% Strain 135°C, 1000 hr	5.0	%	
150°C, 168 hr	11	%	
100% Strain 150°C, 168 hr	6.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	12	%	
150°C, 168 hr	-7.0	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	12	%	
150°C, 168 hr	7.0	%	

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Aging	Nominal Value	Unit	Test Method
Change in Durometer Hardness in Air			ASTM D573
Shore A, 135°C, 1000 hr	-1.0		
Shore A, 150°C, 168 hr	1.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 135°C, 1000 hr	-1.0		
Shore A, 150°C, 168 hr	1.0		
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	140	%	ASTM D471
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	140	%	ISO 1817
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.5 mm, Natural and Black Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
200°C	270	Pa·s	ASTM D3835
200°C	270	Pa·s	ISO 11443

Legal Statement

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Processing Information			
Injection	Nominal Value	Unit	
Rear Temperature	180 to 215	°C	
Middle Temperature	180 to 215	°C	
Front Temperature	180 to 215	°C	
Nozzle Temperature	187 to 220	°C	
Processing (Melt) Temp	185 to 220	°C	
Mold Temperature	10 to 55	°C	
Back Pressure	0.100 to 1.00	MPa	
Screw Speed	100 to 200	rpm	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	180 to 200	°C	
Cylinder Zone 2 Temp.	180 to 205	°C	
Cylinder Zone 3 Temp.	187 to 210	°C	
Cylinder Zone 4 Temp.	187 to 210	°C	
Melt Temperature	195 to 215	°C	
Die Temperature	195 to 215	°C	
Take-Off Roll	20 to 50	°C	
Extrusion Notes			
Screen Pack: 20 to 60 mesh			
Screw: general purpose			
Compression Ratio: 3:1			

Notes

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

² Method Ba, Angle (Unnicked)

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