Sarlink® TPV 3150

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

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® 3150, available in NAT and BLK, is a medium 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 Specific Gravity	• Medium Hardness • Medium Heat Resistance • Resilient
Uses	• Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Diaphragms	• Gaskets • General Purpose • Industrial Applications • O-rings • Profiles	• Rubber Replacement • Seals • Weatherstripping
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• CHRYSLER MS-AR-80 Type A Color: Black • CHRYSLER MS-AR-80 Type A Color: Natural • GM QK 003513 Color: Black • GM QK 003513 Color: Natural	• HONDA Unspecified Color: Black • PSA Peugeot-Citroën SPA Color: Black • RENAULT F.R.M. 6A 05 A08 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	• Blow Molding	• Extrusion	• Injection Molding

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.948	g/cm³	ASTM D792
Density	0.950	g/cm³	ISO 1183
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
Across Flow : 100% Strain	1.90	MPa	
Flow : 100% Strain	3.00	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	1.90	MPa	
Flow : 100% Strain	3.00	MPa	
Tensile Strength			ASTM D412
Across Flow : Break	5.10	MPa	
Flow : Break	4.10	MPa	

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Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
Across Flow : Break	5.10	MPa	
Flow : Break	4.10	MPa	
Tensile Elongation			ASTM D412
Across Flow : Break	600	%	
Flow : Break	240	%	
Tensile Elongation			ISO 37
Across Flow : Break	600	%	
Flow : Break	240	%	
Tear Strength - Across Flow	24.5	kN/m	ASTM D624
Tear Strength - Across Flow [2]	24.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	20	%	
70°C, 22 hr	32	%	
125°C, 70 hr	52	%	
Compression Set			ISO 815
23°C, 22 hr	20	%	
70°C, 22 hr	32	%	
125°C, 70 hr	52	%	

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		

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	-6.0	%	
100% Strain, 135°C, 1000 hr	7.0	%	
150°C, 168 hr	7.0	%	
100% Strain, 150°C, 168 hr	5.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	-6.0	%	
100% Strain 135°C, 1000 hr	7.0	%	
150°C, 168 hr	7.0	%	
100% Strain 150°C, 168 hr	5.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	-7.0	%	
150°C, 168 hr	8.0	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	-7.0	%	
150°C, 168 hr	8.0	%	

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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	2.0		
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)	130	%	ASTM D471
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	130	%	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

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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