

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

General Information

Product Description

Conoral

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	• Europe	North America
	Asia Pacific	Latin America	
	 Chemical Resistant 	 Good Surface Finish 	
	 Good Adhesion 	 Good Weather Resistance 	 Medium Hardness
Features	 Good Flexibility 	 High Elasticity 	 Medium Heat Resistance
	 Good Moldability 	 Low Density 	 Resilient
	 Good Processability 	 Low Specific Gravity 	
	 Automotive Applications 	• Gaskets	
	 Automotive Exterior Parts 	 General Purpose 	 Rubber Replacement
Uses	 Automotive Interior Parts 	 Industrial Applications 	• Seals
	 Automotive Under the Hood 	• O-rings	 Weatherstripping
	 Diaphragms 	 Profiles 	
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 	PSA Peugeot-Citroën SPA Color: VAG VW501 79 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 U	Jnit	Test Method
Density / Specific Gravity	0.948 g/	/cm³	ASTM D792
Density	0.950 g/s	/cm³	ISO 1183
Elastomers	Nominal Value U	Jnit	Test Method
Tensile Stress			ASTM D412
Across Flow: 100% Strain	1.90 M	⁄IPa	
Flow: 100% Strain	3.00 M	⁄IPa	
Tensile Stress			ISO 37
Across Flow: 100% Strain	1.90 M	⁄IPa	
Flow: 100% Strain	3.00 M	⁄IPa	
Tensile Strength			ASTM D412
Across Flow: Break	5.10 M	ΛPа	
Flow: Break	4.10 M	/IPa	

Revision Date: 4/9/2018

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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		Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	54		1101111 1522 10
Shore A, 5 sec, Injection Molded	56		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	54		150 000
Shore A, 5 sec, Injection Molded	56		
Thermal	Nominal Value	Unit	Test Method
RTI Elec	50.0		UL 746B
RTI Imp	50.0		UL 746B
RTI Str	50.0		UL 746B
Aging	Nominal Value		Test Method
<u> </u>	Nominal value	UIII	ASTM D573
Change in Tensile Strength in Air - Across Flow	-6.0	0/	ASTM D3/3
135°C, 1000 hr 100% Strain, 135°C, 1000 hr	7.0		
150°C, 168 hr	7.0		
	5.0		
100% Strain, 150°C, 168 hr	3.0	70	ICO 100
Change in Tensile Strength in Air - Across Flow	6.0	0/	ISO 188
135°C, 1000 hr	-6.0 7.0		
100% Strain 135°C, 1000 hr	7.0 7.0		
150°C, 168 hr			
100% Strain 150°C, 168 hr Change in Ultimate Elongation in Air - Across Flow	5.0	/0	ACTM D572
Change in Ultimate Florigation in Air - Across Flow			ASTM D573
	- ^		
135°C, 1000 hr	-7.0		
135°C, 1000 hr 150°C, 168 hr	-7.0 8.0		V00 100
135°C, 1000 hr 150°C, 168 hr Change in Tensile Strain at Break in Air - Across Flow	8.0	%	ISO 188
135°C, 1000 hr 150°C, 168 hr		%	ISO 188

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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)	НВ		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.

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² Method Ba, Angle (Unnicked)

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