

# Teknor Apex Company - Thermoplastic Vulcanizate

Thursday, June 29, 2017

### **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® 3190, available in NAT and BLK, is a hard 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	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>Latin America</li></ul>	North America
Features	<ul><li>Chemical Resistant</li><li>Fatigue Resistant</li><li>General Purpose</li><li>Good Adhesion</li><li>Good Flexibility</li></ul>	<ul><li>Good Moldability</li><li>Good Processability</li><li>Good Surface Finish</li><li>Heat Aging Resistant</li><li>High Hardness</li></ul>	<ul><li>Low Density</li><li>Low Specific Gravity</li><li>Resilient</li><li>Weather Resistant</li></ul>
Uses	<ul><li>Automotive Applications</li><li>Automotive Exterior Parts</li><li>Automotive Interior Parts</li><li>Automotive Under the Hood</li></ul>	<ul><li>Blow Molding Applications</li><li>Gaskets</li><li>Industrial Applications</li><li>Profiles</li></ul>	<ul><li>Rubber Replacement</li><li>Seals</li><li>Sheet</li><li>Weatherstripping</li></ul>
Agency Ratings	• UL 94		
RoHS Compliance	RoHS Compliant		
Automotive Specifications	<ul> <li>CHRYSLER MS-AR-80 Type</li> <li>CHRYSLER MS-AR-80 Type</li> <li>FORD WSD-M2D382-A1 Colo</li> <li>GM QK 3526 Type 6 Color: BI</li> <li>GM QK 3526 Type 6 Color: NI</li> <li>NISSAN Unspecified Color: BI</li> <li>PSA Peugeot-Citroën B62 030</li> <li>RENAULT F.E.M. 03 20 007 C</li> <li>VAG VW501 23 Color: Black</li> </ul>	E Color: Natural or: Black lack atural lack 00 version G Color: Black	
Appearance	Black	Natural Color	• Opaque
Forms	• Pellets		
Processing Method	Blow Molding	Extrusion	Injection Molding

ASTM & ISO Properties <sup>1</sup>			
Physical	Nominal Value Unit	Test Method	
Specific Gravity	0.940	ASTM D792	
Density	0.940 g/cm³	ISO 1183	
Elastomers	Nominal Value Unit	Test Method	
Tensile Stress		ASTM D412	
Across Flow: 100% Strain	957 psi		
Flow: 100% Strain	1450 psi	次司 \	
Tensile Stress	1. 持有的	14 1180 37	
Across Flow: 100% Strain	957 lpsi	58958519	
Flow: 100% Strain	1450 05小量: 021		
Tensile Strength	L. APEX com	ASTM D412	
Across Flow : Break	1450 psi 1750 psi 1750 psi		
Flow : Break	teknorapo 1750 psi		

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Elastomers	Nominal Value	Unit	Test Method
Tensile Stress		<u></u>	ISO 37
Across Flow : Break	1960	psi	
Flow : Break	1750	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	700	%	
Flow : Break	380	%	
Tensile Elongation			ISO 37
Across Flow : Break	700	%	
Flow : Break	380	%	
Tear Strength - Across Flow	460	lbf/in	ASTM D624
Tear Strength - Across Flow <sup>2</sup>	460	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	48	%	
158°F, 22 hr	61		
257°F, 70 hr	75		
Compression Set	70	. •	ISO 815
73°F, 22 hr	48	%	100 010
158°F, 22 hr	61		
257°F, 70 hr	75		
Hardness	Nominal Value		Test Method
Durometer Hardness	Nominal value	UIIIL	ASTM D2240
	20		ASTM D2240
Shore A, 5 sec, Extruded	89		
Shore A, 5 sec, Injection Molded	92		100.000
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	89		
Shore A, 5 sec, Injection Molded	92		
Thermal Thermal	Nominal Value		Test Method
RTI Elec	122		UL 746
RTI Imp	122		UL 746
RTI Str	122	°F	UL 746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
275°F, 1000 hr	-10	%	
100% Strain, 275°F, 1000 hr	9.0	%	
302°F, 168 hr	-5.0	%	
100% Strain, 302°F, 168 hr	11	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-10	%	
100% Strain 275°F, 1000 hr	9.0	%	
302°F, 168 hr	-5.0	%	
100% Strain 302°F, 168 hr	11	%	(限公)
Change in Ultimate Elongation in Air - Across Flow		到技术	ASTM D573
	- LA 17.	%_===	021-58950
275°F, 1000 hr			
275°F, 1000 hr 302°F, 168 hr	海松朝亚"	港派电话:	
	LINOR APEXE	所 供系电话:	ISO 188
302°F, 168 hr	-5.0 11 TEKNOR APEXIX TEKNOR apex.shshsj.co	%	ISO 188

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Aging	Nominal Value	Unit	Test Method ASTM D573
Change in Durometer Hardness in Air			
Shore A, 275°F, 1000 hr	-1.0		
Shore A, 302°F, 168 hr	2.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 275°F, 1000 hr	-1.0		
Shore A, 302°F, 168 hr	2.0		
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	73	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	73	%	ISO 1817
Flammability	Nominal Value \	Unit	Test Method
Flame Rating (0.06 in, Natural and Black Colors)	НВ		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
392°F	310	Pa·s	ISO 11443
392°F	310	Pa·s	ASTM D3835

	Processing Information			
Injection	Nominal Value	Unit		
Drying Temperature	180	°F		
Drying Time	3.0	hr		
Rear Temperature	356 to 419	°F		
Middle Temperature	356 to 419	°F		
Front Temperature	356 to 419	°F		
Nozzle Temperature	369 to 428	°F		
Processing (Melt) Temp	365 to 428	°F		
Mold Temperature	50 to 131	°F		
Back Pressure	14.5 to 145	psi		
Screw Speed	100 to 200	rpm		
Extrusion	Nominal Value	Unit		
Drying Temperature	180	°F		
Drying Time	3.0	hr		
Cylinder Zone 1 Temp.	356 to 392	°F		
Cylinder Zone 2 Temp.	356 to 401	°F		
Cylinder Zone 3 Temp.	369 to 410	°F		
Cylinder Zone 4 Temp.	369 to 410	°F		
Melt Temperature	383 to 419	°F		
Die Temperature	383 to 419	°F		
Take-Off Roll	68 to 122	°F		

### **Extrusion Notes**

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

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Method Ba, Angle (Unnicked)

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