

# Sarlink® TPV 3160

Teknor Apex Company - Thermoplastic Vulcanizate

Monday, April 3, 2017

## General Information

### Product Description

SARLINK® TPV 3160 is a general purpose thermoplastic vulcanizate featuring excellent flex fatigue resistance, heat aging and resilience. SARLINK® TPV 3160 is a medium hardness, low density grade offered in Nat and Black for use in injection molded parts, sheet and profile extrusions such as weather-stripping and can also be blow molded into boots and ducts.

### General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Bondability • Chemical Resistant • General Purpose • Good Adhesion • Good Flexibility	• Good Moldability • Good Processability • Good Surface Finish • High Elasticity • Low Density	• Medium Hardness • Medium Heat Resistance • Resilient • Weather Resistant
Uses	• Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Diaphragms	• Gaskets • General Purpose • Industrial Applications • O-rings • Pipe Seals	• Plugs • Profiles • Rubber Replacement • Seals • Weatherstripping
Agency Ratings	• UL 94	• UL QMFZ2	• UL QMFZ8
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	<ul style="list-style-type: none"> <li>• BMW Unspecified Color: Black</li> <li>• CHRYSLER MS-AR-80 Type B Color: Black</li> <li>• CHRYSLER MS-AR-80 Type B Color: Natural</li> <li>• DAIMLER DBL 5562.30 Color: Black</li> <li>• FORD WSD-M2D379-A1 Color: Black</li> <li>• GM QK 003521 Color: Black</li> <li>• GM QK 003521 Color: Natural</li> <li>• HONDA Unspecified Color: Black</li> <li>• PSA Peugeot-Citroën B62 0300 version G Color: Black</li> <li>• SAE J3000 Color: Black</li> <li>• SAE J3000 Color: Natural</li> </ul>		
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	0.950		ASTM D792
Density	0.950	g/cm <sup>3</sup>	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	363	psi	
Flow : 100% Strain	551	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	363	psi	
Flow : 100% Strain	551	psi	
Tensile Strength			ASTM D412
Across Flow : Break	914	psi	
Flow : Break	783	psi	

Revision Date: 1/10/2017

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<b>Elastomers</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Stress			ISO 37
Across Flow : Break	914	psi	
Flow : Break	783	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	640	%	
Flow : Break	270	%	
Tensile Elongation			ISO 37
Across Flow : Break	640	%	
Flow : Break	270	%	
Tear Strength - Across Flow	180	lbf/in	ASTM D624
Tear Strength - Across Flow <sup>2</sup>	180	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	23	%	
158°F, 22 hr	34	%	
257°F, 70 hr	55	%	
Compression Set			ISO 815
73°F, 22 hr	23	%	
158°F, 22 hr	34	%	
257°F, 70 hr	55	%	
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	62		
Shore A, 5 sec, Injection Molded	65		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	62		
Shore A, 5 sec, Injection Molded	65		
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
RTI Elec	122	°F	UL 746
RTI Imp	122	°F	UL 746
RTI Str	122	°F	UL 746
<b>Aging</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Change in Tensile Strength in Air - Across Flow			ASTM D573
275°F, 1000 hr	-4.0	%	
100% Strain, 275°F, 1000 hr	3.0	%	
302°F, 168 hr	-1.0	%	
100% Strain, 302°F, 168 hr	7.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-4.0	%	
100% Strain 275°F, 1000 hr	3.0	%	
302°F, 168 hr	-1.0	%	
100% Strain 302°F, 168 hr	7.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
275°F, 1000 hr	-5.0	%	
302°F, 168 hr	-11	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
275°F, 1000 hr	-5.0	%	
302°F, 168 hr	-11	%	

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Aging	Nominal Value	Unit	Test Method
Change in Durometer Hardness in Air			ASTM D573
Shore A, 275°F, 1000 hr	2.0		
Shore A, 302°F, 168 hr	3.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 275°F, 1000 hr	2.0		
Shore A, 302°F, 168 hr	3.0		
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	120	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	120	%	ISO 1817
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, Natural and Black Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
392°F	310		ISO 11443
392°F	310	Pa·s	ASTM D3835

### Legal Statement

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### 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

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### Extrusion Notes

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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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#### Teknor Apex Company Corporate Headquarters

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