

Sarlink® TPV 3160

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® 3160, 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	• Asia Pacific • Europe	• Latin America • North America	
Features	• Bondability • Chemical Resistant • General Purpose • Good Adhesion • Good Flexibility	• Good Moldability • Good Processability • Good Surface Finish • Good Weather Resistance • High Elasticity	• Low Density • 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 • 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"> • BMW Unspecified Color: Black • CHRYSLER MS-AR-80 Type B Color: Black • CHRYSLER MS-AR-80 Type B Color: Natural • DAIMLER DBL 5562.30 Color: Black • FORD WSD-M2D379-A1 Color: Black • GM QK 003521 Color: Black • GM QK 003521 Color: Natural • HONDA Unspecified Color: Black • PSA Peugeot-Citroën B62 0300 version G Color: Black • SAE J3000 Color: Black • SAE J3000 Color: Natural 		
UL File Number	• QMFZ2.E54709		
Appearance	• Black	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Blow Molding	• Extrusion	• Injection Molding

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.948	g/cm ³	ASTM D792
Density	0.950	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	2.50	MPa	
Flow : 100% Strain	3.80	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	2.50	MPa	
Flow : 100% Strain	3.80	MPa	

Revision Date: 8/28/2024

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Elastomers	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D412
Across Flow : Break	6.30	MPa	
Flow : Break	5.40	MPa	
Tensile Stress			ISO 37
Across Flow : Break	6.30	MPa	
Flow : Break	5.40	MPa	
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	31.5	kN/m	ASTM D624
Tear Strength - Across Flow ²	32.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	23	%	
70°C, 22 hr	34	%	
125°C, 70 hr	55	%	
Compression Set			ISO 815
23°C, 22 hr	23	%	
70°C, 22 hr	34	%	
125°C, 70 hr	55	%	
Hardness	Nominal Value	Unit	Test Method
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		
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	-4.0	%	
100% Strain, 135°C, 1000 hr	3.0	%	
150°C, 168 hr	-1.0	%	
100% Strain, 150°C, 168 hr	7.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	-4.0	%	
100% Strain 135°C, 1000 hr	3.0	%	
150°C, 168 hr	-1.0	%	
100% Strain 150°C, 168 hr	7.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	-5.0	%	
150°C, 168 hr	-11	%	

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	-5.0	%	
150°C, 168 hr	-11	%	
Change in Durometer Hardness in Air			ASTM D573
Shore A, 135°C, 1000 hr	2.0		
Shore A, 150°C, 168 hr	3.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 135°C, 1000 hr	2.0		
Shore A, 150°C, 168 hr	3.0		
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	120	%	ASTM D471
Change in Volume (125°C, 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 (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	310	Pa·s	ASTM D3835
200°C	310		ISO 11443

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	82	°C
Drying Time	3.0	hr
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
Drying Temperature	82	°C
Drying Time	3.0	hr
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

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Extrusion	Nominal Value	Unit
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)

Teknor Apex Company Corporate Headquarters	Teknor Apex B.V.	Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.	Teknor Apex Asia Pacific PTE. LTD.
<i>In U.S. for Vinyls, TPEs, Colorants,</i>	Brightlands Chemelot Campus Umonderbaan 22	No. 78 Ping Sheng Road	41 Shipyard Road
<i>Engineered Thermoplastics (Chem Polymer)</i> 505 Central Avenue Pawtucket, Rhode Island 02861 U.S.	6167 RD Geleen, Netherlands	Suzhou Industrial Park Jiangsu, China 215126	Singapore 628134
Phone: 401-725-8000 Fax: 401-725-8095 Toll Free (U.S. only) 800-556-3864	Phone: +31 46 7020 950 Fax: +31 46 7020 990	Phone: (86) 512-6287-1550 Fax: (86) 512-6288-8371	Phone: (65) 6265-2544 Fax: (65) 6265-1821
www.teknorapex.com info@teknorapex.com	www.teknorapex.com tpe@teknorapex.com	www.teknorapex.com infotaap@teknorapex.com	www.teknorapex.com infotaap@teknorapex.com

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