Sarlink® TPV 3170

Teknor Apex Company - Thermoplastic Vulcanizate

Tuesday, June 11, 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® 3170, 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	• Appliance Components • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Blow Molding Applications	• Gaskets • General Purpose • Handles • Hose • Industrial Applications • O-rings	• Pipe Seals • Profiles • Rubber Replacement • Seals • Tubing
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• BMW Mini/BMW Unspecified Color: Natural • CHRYSLER MS-AR-80 Type C Color: Black • CHRYSLER MS-AR-80 Type C Color: Natural • DAIMLER DBL 5556.21 Color: Black • DAIMLER DBL 5562.30 Color: Black • GM QK 3523 L Color: Black • GM QK 3523 L Color: Natural • PSA Peugeot-Citroën B62 0300 version G Color: Black • TOYOTA TSM 1707G-7 Color: Black • VAG VW501 23 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	3.30	MPa	
Flow : 100% Strain	5.10	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	3.30	MPa	
Flow : 100% Strain	5.10	MPa	

Revision Date: 4/9/2018

Sarlink® TPV 3170

Teknor Apex Company - Thermoplastic Vulcanizate

Elastomers	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D412
Across Flow : Break	7.72	MPa	
Flow : Break	6.70	MPa	
Tensile Stress			ISO 37
Across Flow : Break	7.70	MPa	
Flow : Break	6.70	MPa	
Tensile Elongation			ASTM D412
Across Flow : Break	670	%	
Flow : Break	300	%	
Tensile Elongation			ISO 37
Across Flow : Break	670	%	
Flow : Break	300	%	
Tear Strength - Across Flow	42.0	kN/m	ASTM D624
Tear Strength - Across Flow [2]	42.0	kN/m	ISO 34-1
Compression Set			ASTM D395
23°C, 22 hr	25	%	
70°C, 22 hr	43	%	
125°C, 70 hr	63	%	
Compression Set			ISO 815
23°C, 22 hr	25	%	
70°C, 22 hr	43	%	
125°C, 70 hr	63	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	71		
Shore A, 5 sec, Injection Molded	75		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	71		
Shore A, 5 sec, Injection Molded	75		

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	-8.0	%	
100% Strain, 135°C, 1000 hr	10	%	
150°C, 168 hr	-4.0	%	
100% Strain, 150°C, 168 hr	5.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	-8.0	%	
100% Strain 135°C, 1000 hr	10	%	
150°C, 168 hr	-4.0	%	
100% Strain 150°C, 168 hr	5.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	-13	%	
150°C, 168 hr	-14	%	

Revision Date: 4/9/2018

Sarlink® TPV 3170

Teknor Apex Company - Thermoplastic Vulcanizate

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	-13	%	
150°C, 168 hr	-14	%	
Change in Durometer Hardness in Air			ASTM D573
Shore A, 135°C, 1000 hr	-1.0		
Shore A, 150°C, 168 hr	3.0		
Change in Shore Hardness in Air			ISO 188
Shore A, 135°C, 1000 hr	-1.0		
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

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	290	Pa·s	ASTM D3835
200°C	290	Pa·s	ISO 11443

Legal Statement

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
Take-Off Roll	20 to 50	°C

Revision Date: 4/9/2018

Sarlink® TPV 3170

Teknor Apex Company - Thermoplastic Vulcanizate

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

In U.S. for Vinyls, TPEs, Colorants,

Engineered Thermoplastics (Chem Polymer)
505 Central Avenue
Pawtucket, Rhode Island 02861 U.S.

Phone: 401-725-8000
Fax: 401-725-8095
Toll Free (U.S. only) 800-556-3864

www.teknorapex.com
info@teknorapex.com

Teknor Apex B.V.

Brightlands Chemelot Campus Umonderbaan 22
6167 RD Geleen, Netherlands

Phone: +31 46 7020 950
Fax: +31 46 7020 990

www.teknorapex.com
tpe@teknorapex.com

Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.

No. 78 Ping Sheng Road

Suzhou Industrial Park
Jiangsu, China 215126

Phone: (86) 512-6287-1550
Fax: (86) 512-6288-8371

www.teknorapex.com
infotaap@teknoapex.com

Teknor Apex Asia Pacific PTE. LTD.

41 Shipyard Road

Singapore 628134

Phone: (65) 6265-2544
Fax: (65) 6265-1821

www.teknorapex.com
infotaap@teknorapex.com

Revision Date: 4/9/2018