

Sarlink® TPV 3180

Thermoplastic Vulcanizate

Teknor Apex Company

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

SARLINK® 3180 is a multi-purpose thermoplastic vulcanizate featuring excellent flex fatigue resistance, heat aging and resilience. SARLINK® 3180 is a high hardness 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
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E54709-101009572
Search for UL Yellow Card	• Teknor Apex Company • Sarlink® TPV
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• General Purpose • Good Chemical Resistance • Good Heat Aging Resistance • Good Moldability • Good Processability • Good Surface Finish • High Hardness • Resilient
Uses	• Agricultural Applications • Appliance Components • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Blow Molding Applications • General Purpose • Industrial Applications • Profiles • Profiles • Rubber Replacement • Sheet • Weatherstripping
Appearance	• Black • Natural Color • Opaque
Forms	• Pellets
Processing Method	• Blow Molding • Extrusion • Injection Molding

Physical	Nominal Value Unit	Test Method
Specific Gravity		
--	0.948 g/cm ³	ASTM D792
--	0.950 g/cm ³	ISO 1183

Elastomers	Nominal Value Unit	Test Method
Tensile Stress		ASTM D412
Across Flow : 100% Strain	4.50 MPa	ISO 37
Flow : 100% Strain	6.70 MPa	
Tensile Strength		
Across Flow : Break	9.38 MPa	ASTM D412
Flow : Break	8.48 MPa	ASTM D412
Across Flow : Break	9.40 MPa	ISO 37
Flow : Break	8.50 MPa	ISO 37
Tensile Elongation		ASTM D412
Across Flow : Break	690 %	ISO 37
Flow : Break	330 %	
Tear Strength - Across Flow		
--	50.8 kN/m	ASTM D624
-- ⁴	51 kN/m	ISO 34-1
Compression Set		ASTM D395
23°C, 22 hr	32 %	ISO 815
70°C, 22 hr	50 %	
125°C, 70 hr	65 %	

Hardness	Nominal Value Unit	Test Method
Durometer Hardness		ASTM D2240
Shore A, 5 sec, Extruded	80	ISO 868
Shore A, 5 sec, Injection Molded	84	



Thermal	Nominal Value Unit	Test Method
RTI Elec	50.0 °C	UL 746
RTI Imp	50.0 °C	UL 746
RTI Str	50.0 °C	UL 746
Aging	Nominal Value Unit	Test Method
Change in Tensile Strength in Air - Across Flow		
135°C, 1000 hr	-9.0 %	ASTM D573 ISO 188
100% Strain, 135°C, 1000 hr	17 %	ASTM D573
150°C, 168 hr	-8.0 %	ASTM D573 ISO 188
100% Strain, 150°C, 168 hr	9.0 %	ASTM D573
100% Strain 135°C, 1000 hr	17 %	ISO 188
100% Strain 150°C, 168 hr	9.0 %	ISO 188
Change in Ultimate Elongation in Air - Across Flow		
135°C, 1000 hr	-15 %	ASTM D573 ISO 188
150°C, 168 hr	-16 %	
Change in Durometer Hardness in Air		
Shore A, 135°C, 1000 hr	0.0	ASTM D573 ISO 188
Shore A, 150°C, 168 hr	2.0	
Change in Volume		
125°C, 70 hr, in IRM 903 Oil	95 %	ASTM D471 ISO 1817
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.50 mm, Natural and Black Colors	HB	
Additional Information	Nominal Value Unit	Test Method
Apparent Shear Viscosity		
Capillary : 200°C	290 Pa·s	ASTM D3835
Capillary, @ 206/s : 200°C	290 Pa·s	ISO 11443

Legal Statement

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Injection	Nominal Value Unit
Drying Temperature	82.2 °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	10.0 to 55.0 °C
Back Pressure	0.100 to 1.00 MPa
Screw Speed	100 to 200 rpm
Extrusion	Nominal Value Unit
Drying Temperature	82.2 °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



Extrusion	Nominal Value Unit
Melt Temperature	195 to 215 °C
Die Temperature	195 to 215 °C
Take-Off Roll	20.0 to 50.0 °C

Extrusion Notes

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

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Method Ba, Angle (Unnicked)



Where to Buy

Supplier

Teknor Apex Company
Pawtucket, RI USA
Telephone: 800-556-3864
Web: <http://www.teknorapex.com/>

Distributor

Chase Plastic Services, Inc.

Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here:
<http://www.chaseplastics.com/contact/locations>
Telephone: 800-232-4273
Web: <http://www.chaseplastics.com/>
Availability: North America

Distrupol Ltd

Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: <http://www.distrupol.com/>
Availability: Belgium, Denmark, Finland, Ireland, Luxembourg, Netherlands, Norway, Sweden, United Kingdom

Erteco Rubber & Plastics AB

Telephone: +46 8-587 517 00
Web: <http://www.erteco.se/>
Availability: Denmark, Finland, Norway, Sweden

Nexeo Solutions - Europe

Nexeo Solutions is a Pan European distribution company. Contact Nexeo for availability of individual products by country.
Telephone: +34-93-480-9125
Web: <http://www.nexeosolutions.com/>
Availability: Russian Federation

