

# Sarlink® TPV 3450N

Teknor Apex Company - Thermoplastic Vulcanizate

Thursday, June 29, 2017

## General Information

### Product Description

Sarlink TPV 3450N is a general purpose thermoplastic vulcanizate used in consumer and industrial applications. Sarlink TPV 3450N is a low hardness, low density, RoHS compliant grade suitable for injection molding, blow molding, extrusion, and pipe extrusion.

### General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Chemical Resistant • General Purpose • Good Adhesion	• High Heat Resistance • Low Density • Low Hardness	• Low Specific Gravity
Uses	• Fittings • General Purpose	• Piping • Potable Water Applications	
Agency Ratings	• NSF STD-61		
RoHS Compliance	• RoHS Compliant		
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Pipe Extrusion	

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.940		ASTM D792
Density	0.940	g/cm <sup>3</sup>	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	261	psi	
Flow : 100% Strain	319	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	261	psi	
Flow : 100% Strain	319	psi	
Tensile Strength			ASTM D412
Across Flow : Yield	682	psi	
Flow : Yield	479	psi	
Tensile Stress			ISO 37
Across Flow : Break	682	psi	
Flow : Break	479	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	580	%	
Flow : Break	320	%	
Tensile Elongation			ISO 37
Across Flow : Break	580	%	
Flow : Break	320	%	
Tear Strength - Across Flow <sup>2</sup>	137	lbf/in	ASTM D624
Tear Strength - Across Flow	140	lbf/in	ISO 34-1

上海松翰塑化科技有限公司  
 TEKNOR APEX 特诺尔爱佩斯 一级分销商  
 teknorapex.shshsj.com 联系电话: 021-58958519

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<b>Elastomers</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Compression Set			ASTM D395B
73°F, 22 hr	20	%	
158°F, 22 hr	37	%	
212°F, 22 hr	41	%	
Compression Set			ISO 815
73°F, 22 hr	20	%	
158°F, 22 hr	37	%	
257°F, 70 hr	41	%	
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	54		
Shore A, 5 sec, Injection Molded	57		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	54		
Shore A, 5 sec, Injection Molded	57		
<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	-6.0	%	
100% Strain, 275°F, 1000 hr	7.0	%	
302°F, 168 hr	7.0	%	
100% Strain, 302°F, 168 hr	5.0	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	-6.0	%	
100% Strain 275°F, 1000 hr	7.0	%	
302°F, 168 hr	7.0	%	
100% Strain 302°F, 168 hr	5.0	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
275°F, 1000 hr	-7.0	%	
302°F, 168 hr	8.0	%	
Change in Tensile Strain at Break in Air			ISO 188
275°F, 1000 hr	-7.0	%	
302°F, 168 hr	8.0	%	
Change in Durometer Hardness in Air			ASTM D573
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)	130	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	130	%	ISO 1817
<b>Additional Information</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Apparent Shear Viscosity - Capillary, @ 206/s			
392°F	270	Pa·s	ISO 11443
392°F	270	Pa·s	ASTM D3835

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### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr
Rear Temperature	350 to 420	°F
Middle Temperature	350 to 420	°F
Front Temperature	350 to 420	°F
Nozzle Temperature	370 to 430	°F
Processing (Melt) Temp	360 to 430	°F
Mold Temperature	50 to 150	°F
Back Pressure	10.0 to 150	psi
Screw Speed	100 to 200	rpm
Screw L/D Ratio	20.0:1.0	

Extrusion	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	360 to 400	°F
Cylinder Zone 2 Temp.	360 to 400	°F
Cylinder Zone 3 Temp.	370 to 410	°F
Cylinder Zone 4 Temp.	370 to 410	°F
Melt Temperature	380 to 420	°F
Die Temperature	380 to 420	°F
Take-Off Roll	70 to 120	°F

### Extrusion Notes

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

### Notes

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

<sup>2</sup> Die C

#### 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

info@teknorapex.com

#### Teknor Apex U.K. Ltd.

Tat Bank Road  
Oldbury, West Midlands B69 4NH England

Phone: (44) 121-665-2100  
Fax: (44) 121-544-5530

etpsales@teknorapex.co.uk



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