



Sarlink® TPV 3450N

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

Sarlink TPV 3450N is a high performance thermoplastic vulcanizate used in automotive and industrial applications. Sarlink TPV 3450N is a low hardness, low density, RoHS compliant, ANSI STD 61 certified grade suitable for injection molding, blow molding, extrusion, and pipe extrusion. This grade is also available in Black.

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/ANSI/CAN 61 ¹		
RoHS Compliance	• RoHS Compliant		
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Pipe Extrusion	

ASTM & ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.940		ASTM D792
Density	0.940	g/cm ³	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 ³	137	lbf/in	ASTM D624
Tear Strength - Across Flow	137	lbf/in	ISO 34-1

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Elastomers	Nominal Value	Unit	Test Method
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	%	
Hardness	Nominal Value	Unit	Test Method
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		
Aging	Nominal Value	Unit	Test Method
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
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
392°F	270	Pa·s	ASTM D3835
392°F	270	Pa·s	ISO 11443

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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		
¹ IAPMO R&T STD 61 Certification		
² Typical properties: these are not to be construed as specifications.		
³ Die C		