

Sarlink® TPV 3450N

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

A NSF certified, low hardness and multi-purpose thermoplastic elastomer (black and natural color) featuring excellent fluid resistance and high temperature performance. It can be processed by injection molding, blow molding or extrusion for applications in contact with potable water, such as pipes, fittings and appurtenances.

General Information	
Features	Heat resistance, high
	General
	Hardness, low
Uses	Piping system
	Accessories
	General
Agency Ratings	NSF 61
Appearance	Opacity
Forms	Particle
Processing Method	Blow molding
	Pipeline extrusion molding
	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.938	g/cm ³	ASTM D792
--	0.940	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A, 5 seconds, extruded	54		ASTM D2240, ISO 868
Shore A, 5 seconds, injection molding	57		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
Transverse flow: 100% strain	1.80	MPa	ASTM D412, ISO 37
Flow: 100% strain	2.20	MPa	ASTM D412, ISO 37
Tensile Strength			
Transverse flow: Yield	4.70	MPa	ASTM D412
Flow: Yield	3.30	MPa	ASTM D412
Transverse flow: Fracture	4.70	MPa	ISO 37

Flow: Fracture	3.30	MPa	ISO 37
Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	580	%	ASTM D412, ISO 37
Flow: Fracture	320	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
-- ¹	24.0	kN/m	ASTM D624
--	24	kN/m	ISO 34-1
Compression Set			
23°C, 22 hr	20	%	ASTM D395B, ISO 815
70°C, 22 hr	37	%	ASTM D395B, ISO 815
100°C, 22 hr	41	%	ASTM D395B
125°C, 70 hr	41	%	ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-6.0	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	7.0	%	ASTM D573
150°C, 168 hr	7.0	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	5.0	%	ASTM D573
100% strain 135°C, 1000 hr	7.0	%	ISO 188
100% strain 150°C, 168 hr	5.0	%	ISO 188
Change in Ultimate Elongation in Air			
Transverse flow: 135°C, 1000 hr	-7.0	%	ASTM D573
Transverse flow: 150°C, 168 hr	8.0	%	ASTM D573
135°C, 1000 hr	-7.0	%	ISO 188
150°C, 168 hr	8.0	%	ISO 188
Change in Durometer Hardness in Air			ASTM D573, ISO 188
Support a, 135°C, 1000 hr	1.0		ASTM D573, ISO 188
Support a, 150°C, 168 hr	2.0		ASTM D573, ISO 188
Change in Volume			
125°C, 70 hr, in IRM 903 oil	130	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	130	%	ISO 1817
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
200°C	270	Pa · s	ISO 11443
200°C	270	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	3.0	hr	
Rear Temperature	177 - 216	°C	
Middle Temperature	177 - 216	°C	
Front Temperature	177 - 216	°C	

Nozzle Temperature	188 - 221	°C
Processing (Melt) Temp	182 - 221	°C
Mold Temperature	10.0 - 65.6	°C
Back Pressure	0.0689 - 1.03	MPa
Screw Speed	100 - 200	rpm
Screw L/D Ratio	20.0:1.0	

Extrusion	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	182 - 204	°C
Cylinder Zone 2 Temp.	182 - 204	°C
Cylinder Zone 3 Temp.	188 - 210	°C
Cylinder Zone 4 Temp.	188 - 210	°C
Melt Temperature	193 - 216	°C
Die Temperature	193 - 216	°C
Take-Off Roll	21.1 - 48.9	°C

Extrusion instructions

Screen Pack: 20 to 60 meshScrew: 3:1 Compression Ratio

NOTE

1. C mould

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