

Sarlink® TPV 4190

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

SARLINK® 4000 series are multi-purpose thermoplastic elastomers with excellent flex fatigue resistance, heat aging, improved elasticity and resilience designed primarily for demanding automotive applications. SARLINK® 4190N is a high hardness grade for use in injection molded parts, sheet and profile extrusions such as weather-stripping and expansion joints. It can also be blow molded into boots and ducts.

General Information	
UL YellowCard	E54709-101009579
Features	Good heat aging resistance
	Fatigue resistance
	High hardness
	Elastic
Uses	Weather-resistant sealing strip
	Sheet
	Application in Automobile Field
	Profile
Appearance	Opacity
Forms	Particle
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
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A, 5 seconds, extruded	86		ASTM D2240, ISO 868
Shore A, 5 seconds, injection molding	90		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
Transverse flow: 100% strain	6.70	MPa	ASTM D412, ISO 37
Flow: 100% strain	10.2	MPa	ASTM D412, ISO 37
Tensile Stress			ASTM D412, ISO 37
Transverse flow: Fracture	14.5	MPa	ASTM D412, ISO 37
Flow: Fracture	13.6	MPa	ASTM D412, ISO 37

Tensile Elongation			ASTM D412, ISO 37
Transverse flow: Fracture	650	%	ASTM D412, ISO 37
Flow: Fracture	380	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
--	72	kN/m	ASTM D624
-- ¹	71	kN/m	ISO 34-1
Compression Set			ASTM D395, ISO 815
23°C, 22 hr	36	%	ASTM D395, ISO 815
70°C, 22 hr	48	%	ASTM D395, ISO 815
125°C, 70 hr	72	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			
135°C, 1000 hr	-11	%	ASTM D573, ISO 188
100% strain, 135°C, 1000 hr	15	%	ASTM D573
150°C, 168 hr	-8.0	%	ASTM D573, ISO 188
100% strain, 150°C, 168 hr	10	%	ASTM D573
100% strain 135°C, 1000 hr	15	%	ISO 188
100% strain 150°C, 168 hr	10	%	ISO 188
Change in Ultimate Elongation in Air - Across Flow			ASTM D573, ISO 188
135°C, 1000 hr	-16	%	ASTM D573, ISO 188
150°C, 168 hr	-17	%	ASTM D573, ISO 188
Change in Durometer Hardness in Air			ASTM D573, ISO 188
Support a, 135°C, 1000 hr	3.0		ASTM D573, ISO 188
Support a, 150°C, 168 hr	3.0		ASTM D573, ISO 188
Change in Volume			
125°C, 70 hr, in IRM 903 oil	54	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	54	%	ISO 1817
Thermal	Nominal Value	Unit	Test Method
RTI Elec	100	°C	UL 746
RTI Imp	65.0	°C	UL 746
RTI	100	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.00 mm, All Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
200°C	340	Pa · s	ISO 11443
200°C	340	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	
Rear Temperature	180 - 215	°C	
Middle Temperature	180 - 215	°C	

Front Temperature	180 - 215	°C
Nozzle Temperature	187 - 220	°C
Processing (Melt) Temp	185 - 220	°C
Mold Temperature	10.0 - 55.0	°C
Back Pressure	0.100 - 1.00	MPa
Screw Speed	100 - 200	rpm
Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	180 - 200	°C
Cylinder Zone 2 Temp.	180 - 205	°C
Cylinder Zone 3 Temp.	187 - 210	°C
Cylinder Zone 4 Temp.	187 - 210	°C
Melt Temperature	195 - 215	°C
Die Temperature	195 - 215	°C
Take-Off Roll	20.0 - 50.0	°C

Extrusion instructions

Screen Pack: 20 to 60 meshScrew: general purposeCompression Ratio: 3:1
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NOTE

1.	Method B, right-angle specimen (without cut)
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