



Sarlink® TPV 3135

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

Sarlink® 3135 is a low hardness, multi-purpose thermoplastic vulcanizate featuring excellent compression set and high temperature performance. Sarlink® 3135 is offered in Nat and Black and can be processed by injection molding or extrusion for applications such as grips, seals, gaskets, profiles and other articles.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Bondability • General Purpose • Good Adhesion • Good Chemical Resistance • Good Flexibility	• Good Moldability • Good Processability • Good Surface Finish • High Elasticity • High Heat Resistance	• High Melt Stability • Low Density • Low Hardness • Resilient
Uses	• Appliance Components • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Blow Molding Applications	• Gaskets • General Purpose • Handles • Industrial Applications • O-rings • Pipe Seals	• Plugs • Profiles • Rubber Replacement • Seals
Appearance	• Black	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.930	g/cm ³	ASTM D792
Density	0.930	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			
Across Flow : 100% Strain	1.10	MPa	ASTM D412
Across Flow : 100% Strain	1.10	MPa	ISO 37
Flow : 100% Strain	2.10	MPa	ASTM D412
Flow : 100% Strain	2.10	MPa	ISO 37
Tensile Stress			
Across Flow : Break	4.00	MPa	ASTM D412
Across Flow : Break	4.00	MPa	ISO 37
Flow : Break	2.20	MPa	ASTM D412
Flow : Break	2.20	MPa	ISO 37
Tensile Elongation			
Across Flow : Break	600	%	ASTM D412
Across Flow : Break	600	%	ISO 37
Flow : Break	200	%	ISO 37
Flow : Break	200	%	ASTM D412
Tear Strength - Across Flow			
--	15	kN/m	ASTM D624
-- ²	15	kN/m	ISO 34-1

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Elastomers	Nominal Value	Unit	Test Method
Compression Set			
23°C, 22 hr	15	%	ASTM D395
23°C, 22 hr	15	%	ISO 815
70°C, 22 hr	30	%	ASTM D395
70°C, 22 hr	30	%	ISO 815
125°C, 70 hr	52	%	ASTM D395
125°C, 70 hr	52	%	ISO 815
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			
Shore A, 5 sec, Extruded	38		ASTM D2240
Shore A, 5 sec, Extruded	38		ISO 868
Shore A, 5 sec, Injection Molded	43		ASTM D2240
Shore A, 5 sec, Injection Molded	43		ISO 868
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	0.0	%	ASTM D573
135°C, 1000 hr	0.0	%	ISO 188
100% Strain 135°C, 1000 hr	4.0	%	ASTM D573
100% Strain 135°C, 1000 hr	4.0	%	ISO 188
150°C, 168 hr	4.0	%	ASTM D573
150°C, 168 hr	4.0	%	ISO 188
100% Strain 150°C, 168 hr	11	%	ASTM D573
100% Strain 150°C, 168 hr	11	%	ISO 188
Change in Tensile Strain at Break in Air - Across Flow			
135°C, 1000 hr	-2.0	%	ASTM D573
135°C, 1000 hr	-2.0	%	ISO 188
150°C, 168 hr	1.0	%	ISO 188
150°C, 168 hr	1.0	%	ASTM D573
Change in Shore Hardness in Air			
Shore A, 135°C, 1000 hr	-1.0		ASTM D573
Shore A, 135°C, 1000 hr	-1.0		ISO 188
Shore A, 150°C, 168 hr	1.0		ISO 188
Shore A, 150°C, 168 hr	1.0		ASTM D573
Change in Volume			
125°C, 70 hr, in IRM 903 Oil	150	%	ASTM D471
125°C, 70 hr, in IRM 903 Oil	150	%	ISO 1817
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, All Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary, @ 206/s			
200°C	270	Pa·s	ASTM D3835
200°C	270	Pa·s	ISO 11443

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	3.0	hr
Rear Temperature	177 to 216	°C
Middle Temperature	177 to 216	°C
Front Temperature	177 to 216	°C
Nozzle Temperature	188 to 221	°C
Processing (Melt) Temp	182 to 221	°C
Mold Temperature	10.0 to 65.6	°C
Back Pressure	0.0689 to 0.345	MPa
Screw Speed	100 to 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 to 204	°C
Cylinder Zone 2 Temp.	182 to 204	°C
Cylinder Zone 3 Temp.	188 to 210	°C
Cylinder Zone 4 Temp.	188 to 210	°C
Melt Temperature	193 to 216	°C
Die Temperature	193 to 216	°C
Take-Off Roll	21.1 to 48.9	°C

Extrusion Notes

Screen Pack: 20 to 60 Mesh
Screw: General Purpose
Compression Ratio: 3:1

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method Ba, Angle (Unnicked)