

Sarlink® TPV 5750DB

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

General Information

Product Description

Sarlink TPV 5700B series are highly engineered extrusion-grade thermoplastic vulcanizates with outstanding UV stability designed for demanding automotive interior and exterior sealing applications, including glass run channels, waistbelts, weather strips, seals and other profiles. Sarlink TPV 5750DB is a medium hardness, medium density, high performance grade with low fogging and excellent color retention and elastic properties.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Chemical Resistant • High Hardness	• High Heat Resistance • High Tensile Strength	
Uses	• Belts/Belt Repair • Profiles	• Seals • Weatherstripping	
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• GM GMPE/P.016 Color: Black	• GM GMW15812P-TPV(EPDM +PP) Type 10E Color: Black	• TOYOTA TSM 5746G-1 Color: Black
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Profile Extrusion	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.958	g/cm ³	ASTM D792
Density	0.960	g/cm ³	ISO 1183
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Across Flow : 100% Strain	13.1	MPa	
Flow : 100% Strain	18.0	MPa	
Tensile Stress			ISO 37
Across Flow : 100% Strain	13.1	MPa	
Flow : 100% Strain	18.0	MPa	
Tensile Strength			ASTM D412
Across Flow : Break	23.0	MPa	
Flow : Break	21.5	MPa	
Tensile Stress			ISO 37
Across Flow : Break	23.0	MPa	
Flow : Break	21.5	MPa	
Tensile Elongation			ASTM D412
Across Flow : Break	640	%	
Flow : Break	490	%	
Tensile Elongation			ISO 37
Across Flow : Break	640	%	
Flow : Break	490	%	
Tear Strength - Across Flow	142	kN/m	ASTM D624
Tear Strength - Across Flow ²	141	kN/m	ISO 34-1

Revision Date: 1/15/2019

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Elastomers	Nominal Value	Unit	Test Method
Compression Set			ASTM D395
23°C, 22 hr	55	%	
70°C, 22 hr	67	%	
125°C, 70 hr	85	%	
Compression Set			ISO 815
23°C, 22 hr	55	%	
70°C, 22 hr	67	%	
125°C, 70 hr	85	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore D, 5 sec, Extruded	49		
Shore D, 5 sec, Injection Molded	52		
Shore Hardness			ISO 868
Shore D, 5 sec, Extruded	49		
Shore D, 5 sec, Injection Molded	52		
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air - Across Flow			ASTM D573
135°C, 1000 hr	-20	%	
100% Strain, 135°C, 1000 hr	24	%	
150°C, 168 hr	-16	%	
100% Strain, 150°C, 168 hr	15	%	
Change in Tensile Strength in Air - Across Flow			ISO 188
135°C, 1000 hr	-20	%	
100% Strain 135°C, 1000 hr	24	%	
150°C, 168 hr	-16	%	
100% Strain 150°C, 168 hr	15	%	
Change in Ultimate Elongation in Air - Across Flow			ASTM D573
135°C, 1000 hr	-30	%	
150°C, 168 hr	-25	%	
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
135°C, 1000 hr	-30	%	
150°C, 168 hr	-25	%	
Change in Durometer Hardness in Air			ASTM D573
Shore D, 135°C, 1000 hr	4.0		
Shore D, 150°C, 168 hr	3.0		
Change in Shore Hardness in Air			ISO 188
Shore D, 135°C, 1000 hr	4.0		
Shore D, 150°C, 168 hr	3.0		
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	38	%	ASTM D471
Change in Volume (125°C, 70 hr, in IRM 903 Oil)	38	%	ISO 1817
Additional Information	Nominal Value	Unit	Test Method
Apparent Shear Viscosity - Capillary @ 206/s			
200°C	430	Pa·s	ASTM D3835
200°C	430	Pa·s	ISO 11443

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	82	°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 to 66	°C
Back Pressure	0.0689 to 1.03	MPa
Screw Speed	100 to 200	rpm
Screw L/D Ratio	20.0:1.0	

Extrusion	Nominal Value	Unit
Drying Temperature	82	°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
Cylinder Zone 5 Temp.	193 to 216	°C
Melt Temperature	193 to 216	°C
Die Temperature	193 to 216	°C
Take-Off Roll	21 to 49	°C

Extrusion Notes

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

Notes

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

² Method Ba, Angle (Unnicked)

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