

Sarlink® TPV 24946DN-1

Thermoplastic Vulcanizate

Teknor Apex Company

Message:

Sarlink 24946DN-1 XRD is a high performance thermoplastic vulcanizate used in automotive applications. Sarlink 24946DN-1 XRD is a high hardness lubricated grade exhibiting sunlight resistance and UV absorbing characteristics. This grade can be processed by injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Sunlight Resistant		
	Low density		
	smoothness		
	Light stabilization		
	Low liquidity		
	Lubrication		
	Fill		
	High hardness		
	UV absorption		
Uses	Plug		
	Washer		
	Washer		
	Pipe fittings		
	Shock Absorbing Pad		
	Weather-resistant sealing strip		
	Expansion Joint		
	Assembled glass		
RoHS Compliance	RoHS compliance		
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.917	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	4.7	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shore D, 1 second, injection molding	47		ISO 868

Shore D, 5 seconds, injection molding	45		ISO 868
Shore D, 15 seconds, injection molding	44		ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ISO 37
Transverse flow: 100% strain	8.70	MPa	ISO 37
Flow: 100% strain	12.5	MPa	ISO 37
Tensile Stress ²			ISO 37
Transverse flow: Fracture	10.7	MPa	ISO 37
Flow: Fracture	13.7	MPa	ISO 37
Tensile Elongation ³			ISO 37
Transverse flow: Fracture	590	%	ISO 37
Flow: Fracture	480	%	ISO 37
Tear Strength ⁴			ISO 34-1
Transverse flow	130	kN/m	ISO 34-1
Flow	63	kN/m	ISO 34-1
Compression Set ⁵			ISO 815
23°C, 22 hr	39	%	ISO 815
70°C, 22 hr	64	%	ISO 815
90°C, 70 hr	78	%	ISO 815
125°C, 70 hr	98	%	ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air ⁶			ISO 188
Transverse flow: 110°C, 1008 hr	-4.7	%	ISO 188
Flow: 110°C, 1008 hr	12	%	ISO 188
Transverse flow: 100% strain 110°C, 1008 hr	13	%	ISO 188
Flow: 100% strain 110°C, 1008 hr	23	%	ISO 188
Transverse flow: 125°C, 168 hr	1.3	%	ISO 188
Flow: 125°C, 168 hr	29	%	ISO 188
Transverse flow: 100% strain 125°C, 168 hr	17	%	ISO 188
Flow: 100% strain 125°C, 168 hr	41	%	ISO 188
Change in Tensile Strain at Break in Air ⁷			ISO 188
Transverse flow: 110°C, 1008 hr	-45	%	ISO 188
Flow: 110°C, 1008 hr	-49	%	ISO 188
Transverse flow: 125°C, 168 hr	-49	%	ISO 188
Flow: 125°C, 168 hr	-52	%	ISO 188
Change in Shore Hardness in Air			
Support d, 110°C, 1008 hr ⁸	3.2		ISO 188
Support d, 110°C, 1008 hr ⁹	2.9		ISO 188
Support d, 125°C, 168 hr ¹⁰	5.2		ISO 188
Support d, 125°C, 168 hr ¹¹	5.0		ISO 188
Support d, 125°C, 168 hr ¹²	4.5		ISO 188

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 206 sec ⁻¹)	342	Pa · s	ASTM D3835
Legal statement			
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Injection	Nominal Value	Unit	
Rear Temperature	173 - 213	°C	
Middle Temperature	179 - 219	°C	
Front Temperature	184 - 224	°C	
Nozzle Temperature	190 - 230	°C	
Processing (Melt) Temp	190 - 230	°C	
Mold Temperature	35 - 60	°C	
Injection Pressure	1.38 - 6.89	MPa	
Injection Rate	Fast		
Back Pressure	0.172 - 0.862	MPa	
Screw Speed	50 - 120	rpm	
Cushion	3.81 - 25.4	mm	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	166 - 204	°C	
Cylinder Zone 2 Temp.	171 - 210	°C	
Cylinder Zone 3 Temp.	177 - 216	°C	
Cylinder Zone 5 Temp.	182 - 221	°C	
Die Temperature	190 - 227	°C	
Extrusion instructions			
Screw Speed: 30 to 100 rpm			
NOTE			
1.	Type 1, 510mm/min		
2.	Type 1, 510mm/min		
3.	Type 1, 510mm/min		
4.	B method, right angle specimen (without cut), 510mm/min		
5.	Type a		
6.	Type 1		
7.	Type 1		
8.	15 sec		
9.	1 sec		
10.	15 sec		
11.	5 sec		
12.	1 sec		

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