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TEKNOR APEX

Sarlink® TPV 24946DN-1

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

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

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Filled • Good Melt Strength • Good Mold Release • Good Moldability • Good Processability	• High Hardness • Light Stabilized • Low Density • Low Flow • Low Specific Gravity	• Lubricated • Medium Viscosity • Slip
Uses	• Expansion Joint • Gaskets • Glazing	• Grommets • Plugs • Shock Absorbing Pads	• Tubing • Weatherstripping
RoHS Compliance	• RoHS Compliant		
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

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
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2]			ISO 37
Across Flow : 100% Strain	1260	psi	
Flow : 100% Strain	1820	psi	
Tensile Stress [2]			ISO 37
Across Flow : Break	1550	psi	
Flow : Break	1990	psi	
Tensile Elongation [2]			ISO 37
Across Flow : Break	590	%	
Flow : Break	480	%	
Tear Strength [3]			ISO 34-1
Across Flow	734	lbf/in	
Flow	361	lbf/in	
Compression Set [4]			ISO 815
73°F, 22 hr	39	%	
158°F, 22 hr	64	%	
194°F, 70 hr	78	%	
257°F, 70 hr	98	%	

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Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D, 1 sec, Injection Molded	47		
Shore D, 5 sec, Injection Molded	45		
Shore D, 15 sec, Injection Molded	44		
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air [5]			ISO 188
Across Flow : 230°F, 1008 hr	-4.7	%	
Flow : 230°F, 1008 hr	12	%	
Across Flow : 100% Strain 230°F, 1008 hr	13	%	
Flow : 100% Strain 230°F, 1008 hr	23	%	
Across Flow : 257°F, 168 hr	1.3	%	
Flow : 257°F, 168 hr	29	%	
Across Flow : 100% Strain 257°F, 168 hr	17	%	
Flow : 100% Strain 257°F, 168 hr	41	%	
Change in Tensile Strain at Break in Air [5]			ISO 188
Across Flow : 230°F, 1008 hr	-45	%	
Flow : 230°F, 1008 hr	-49	%	
Across Flow : 257°F, 168 hr	-49	%	
Flow : 257°F, 168 hr	-52	%	
Change in Shore Hardness in Air			ISO 188
Shore D, 230°F, 1008 hr [6]	3.2		
Shore D, 230°F, 1008 hr [7]	3.2		
Shore D, 230°F, 1008 hr [8]	2.9		
Shore D, 257°F, 168 hr [6]	5.2		
Shore D, 257°F, 168 hr [7]	5.0		
Shore D, 257°F, 168 hr [8]	4.5		
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Apparent Viscosity (392°F, 206 sec^-1)	342	Pa·s	ASTM D3835

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	344 to 416	°F
Middle Temperature	354 to 426	°F
Front Temperature	364 to 436	°F
Nozzle Temperature	374 to 446	°F
Processing (Melt) Temp	374 to 446	°F
Mold Temperature	95 to 140	°F
Injection Pressure	200 to 1000	psi
Injection Rate	Fast	
Back Pressure	25.0 to 125	psi

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Injection	Nominal Value	Unit
Screw Speed	50 to 120	rpm
Cushion	0.150 to 1.00	in
Extrusion	**Nominal Value**	**Unit**
Cylinder Zone 1 Temp.	330 to 400	°F
Cylinder Zone 2 Temp.	340 to 410	°F
Cylinder Zone 3 Temp.	350 to 420	°F
Cylinder Zone 5 Temp.	360 to 430	°F
Die Temperature	374 to 440	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

[2] Type 1, 20 in/min

[3] Method Ba, Angle (Unnicked), 20 in/min

[4] Type A

[5] Type 1

[6] 15 sec

[7] 5 sec

[8] 1 sec