+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

TEKNOR APEX

Sarlink® TPV R4 3190B XRD (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

Sarlink® R4 3190B XRD is a multi-purpose thermoplastic vulcanizate (TPV) containing 40% post-industrial recycled (PIR) content. The addition of recycled content helps promote a circular economy while decreasing reliance on virgin fossil-based resources and energy. Sarlink R4 3190B XRD is essentially the functional equivalent of its virgin counterpart in terms of processing and performance. Designed for the automotive, industrial, and building & construction markets, this high-durometer TPV can be used in both injection molding and extrusion applications and can be overmolded or co-extruded with PP or other TPEs.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Recycled Content	• Post-Industrial (PIR)/Pre-Consumer, 40%		
Features	• Chemical Resistant • General Purpose • Good Adhesion • Good Flexibility	• Good Moldability • Good Processability • Good Surface Finish • Good Weather Resistance	• Heat Aging Resistant • Medium Hardness • Resilient
Uses	• Agricultural Applications • Appliance Components • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts	• Automotive Under the Hood • Blow Molding Applications • General Purpose • Industrial Applications • Profiles	• Rubber Replacement • Seals • Weatherstripping
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Blow Molding	• Extrusion	• Injection Molding

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.938		ASTM D792
Density	0.936	g/cm³	ISO 1183
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
Across Flow : 100% Strain	942	psi	
Flow : 100% Strain	1160	psi	
Tensile Stress			ISO 37
Across Flow : 100% Strain	942	psi	
Flow : 100% Strain	1160	psi	
Tensile Strength			ASTM D412
Across Flow : Break	1680	psi	
Flow : Break	1700	psi	
Tensile Stress			ISO 37
Across Flow : Break	1680	psi	
Flow : Break	1700	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	630	%	
Flow : Break	590	%	

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Sarlink® TPV R4 3190B XRD (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Vulcanizate

Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation			ISO 37
Across Flow : Break	630	%	
Flow : Break	590	%	
Tear Strength - Across Flow	367	lbf/in	ASTM D624
Tear Strength - Across Flow [2]	304	lbf/in	ISO 34-1
Compression Set			ASTM D395
73°F, 22 hr	33	%	
158°F, 22 hr	52	%	
257°F, 70 hr	65	%	
Compression Set			ISO 815
73°F, 22 hr	33	%	
158°F, 22 hr	52	%	
257°F, 70 hr	65	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	90		
Shore A, 5 sec, Injection Molded	94		
Shore Hardness			ISO 868
Shore A, 5 sec, Extruded	90		
Shore A, 5 sec, Injection Molded	94		
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air - Across Flow			ISO 188
275°F, 1000 hr	1.2	%	
100% Strain, 275°F, 1000 hr	14	%	
302°F, 168 hr	9.6	%	
100% Strain, 302°F, 168 hr	18	%	
Change in Ultimate Elongation in Air - Across Flow			ISO 188
275°F, 1000 hr	-21	%	
302°F, 168 hr	-11	%	
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	84	%	ASTM D471
Change in Volume (257°F, 70 hr, in IRM 903 Oil)	84	%	ISO 1817
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Apparent Shear Viscosity			
Capillary, @ 206/s : 392°F	229	Pa·s	ISO 11443
Capillary, @206/s : 392°F	229	Pa·s	ASTM D3835

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Sarlink® TPV R4 3190B XRD (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Vulcanizate

Injection	Nominal Value	Unit
Rear Temperature	356 to 419	°F
Middle Temperature	356 to 419	°F
Front Temperature	356 to 419	°F
Nozzle Temperature	369 to 428	°F
Processing (Melt) Temp	365 to 428	°F
Mold Temperature	50 to 131	°F
Back Pressure	14.5 to 145	psi
Screw Speed	100 to 200	rpm

Extrusion	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	356 to 392	°F
Cylinder Zone 2 Temp.	356 to 401	°F
Cylinder Zone 3 Temp.	369 to 410	°F
Cylinder Zone 4 Temp.	369 to 410	°F
Melt Temperature	383 to 419	°F
Die Temperature	383 to 419	°F
Take-Off Roll	68 to 122	°F

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)