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TEKNOR APEX

Sarlink® TPE ML-1533N

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Sarlink ML-1533N is a general purpose thermoplastic elastomer designed for automotive interior applications. Sarlink ML-1533N is a clear, low hardness, low density, unfilled grade suitable for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Low Density • Low Hardness	• Low Specific Gravity • Medium Flow	• Without Fillers
Uses	• Automotive Applications	• Automotive Interior Parts	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.900	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	17	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2]			ISO 37
Across Flow : 100% Strain	51.1	psi	
Flow : 100% Strain	128	psi	
Tensile Stress [2]			ISO 37
Across Flow : Break	1110	psi	
Flow : Break	690	psi	
Tensile Elongation [2]			ISO 37
Across Flow : Break	870	%	
Flow : Break	540	%	
Tear Strength [3]			ISO 34-1
Across Flow	63	lbf/in	
Flow	150	lbf/in	
Compression Set [4]			ISO 815
73°F, 22 hr	18	%	
158°F, 22 hr	88	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness			ISO 868
Shore A, 1 sec, Injection Molded	35		
Shore A, 5 sec, Injection Molded	33		
Shore A, 15 sec, Injection Molded	32		

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air [5]			ISO 188
Across Flow : 230°F, 1008 hr	-26	%	
Flow : 230°F, 1008 hr	190	%	
Across Flow : 100% Strain 230°F, 1008 hr	-24	%	
Flow : 100% Strain 230°F, 1008 hr	-4.2	%	
Flow : 257°F, 168 hr	180	%	
Flow : 100% Strain 257°F, 168 hr	-27	%	
Change in Tensile Strain at Break in Air [5]			ISO 188
Across Flow : 230°F, 1008 hr	-29	%	
Flow : 230°F, 1008 hr	-5.3	%	
Flow : 257°F, 168 hr	14	%	
Change in Shore Hardness in Air			ISO 188
Shore A, 230°F, 1008 hr [6]	1.0		
Shore A, 230°F, 1008 hr [7]	0.60		
Shore A, 230°F, 1008 hr [8]	-0.70		
Shore A, 257°F, 168 hr [6]	-7.1		
Shore A, 257°F, 168 hr [7]	-7.3		
Shore A, 257°F, 168 hr [8]	-8.0		

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (392°F, 206 sec^-1)	125	Pa·s	ASTM D3835

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 450	°F
Middle Temperature	370 to 460	°F
Front Temperature	380 to 470	°F
Nozzle Temperature	390 to 480	°F
Processing (Melt) Temp	390 to 480	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in

Injection Notes

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	360 to 450	°F
Cylinder Zone 2 Temp.	370 to 460	°F
Cylinder Zone 3 Temp.	380 to 470	°F
Cylinder Zone 4 Temp.	379 to 469	°F

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Extrusion	Nominal Value	Unit
Cylinder Zone 5 Temp.	390 to 480	°F
Die Temperature	390 to 480	°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