



Sarlink® TPE ML-1170B BLK

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Sarlink ML-1100 is a general purpose thermoplastic elastomer series, available in NAT and BLK designed for automotive interior applications. Sarlink ML-1170B BLK is a medium hardness, high density, filled grade suitable for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Filled • Good Mold Release • Good Moldability • Good Moldability	• Good Processability • Good Processability • High Density • High Specific Gravity	• Medium Flow • Medium Hardness
Uses	• Automotive Applications • Automotive Interior Parts	• General Purpose • Grommets	
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	10	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ISO 37
Across Flow : 100% Strain	293	psi	
Flow : 100% Strain	403	psi	
Tensile Stress ²			ISO 37
Across Flow : Break	856	psi	
Flow : Break	798	psi	
Tensile Elongation ²			ISO 37
Across Flow : Break	780	%	
Flow : Break	680	%	
Tear Strength ³			ISO 34-1
Across Flow	154	lbf/in	
Flow	151	lbf/in	
Compression Set ⁴			ISO 815
73°F, 22 hr	35	%	
158°F, 22 hr	53	%	
194°F, 70 hr	77	%	
257°F, 70 hr	94	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore A, 1 sec, Injection Molded	74		
Shore A, 5 sec, Injection Molded	72		
Shore A, 15 sec, Injection Molded	70		

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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	4.7	%	
Flow : 230°F, 1008 hr	-2.2	%	
Across Flow : 100% Strain 230°F, 1008 hr	9.6	%	
Flow : 100% Strain 230°F, 1008 hr	8.9	%	
Across Flow : 257°F, 168 hr	2.4	%	
Flow : 257°F, 168 hr	-8.3	%	
Across Flow : 100% Strain 257°F, 168 hr	10	%	
Flow : 100% Strain 257°F, 168 hr	13	%	
Change in Tensile Strain at Break in Air ⁵			ISO 188
Across Flow : 230°F, 1008 hr	4.9	%	
Flow : 230°F, 1008 hr	-0.10	%	
Across Flow : 257°F, 168 hr	6.8	%	
Flow : 257°F, 168 hr	0.40	%	
Change in Shore Hardness in Air			ISO 188
Shore A, 230°F, 1008 hr ⁶	3.6		
Shore A, 230°F, 1008 hr ⁷	3.1		
Shore A, 230°F, 1008 hr ⁸	2.0		
Shore A, 257°F, 168 hr ⁶	4.8		
Shore A, 257°F, 168 hr ⁷	4.1		
Shore A, 257°F, 168 hr ⁸	2.4		
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (392°F, 206 sec [^] -1)	138	Pa·s	ASTM D3835
Additional Information	Nominal Value	Unit	Test Method
Xenon Weatherometer			SAE J1885
Delta E - 1250 kJ	0.140		
Delta E - 2500 kJ	0.600		

Processing Information		
Injection	Nominal Value	Unit
Rear Temperature	340 to 380	°F
Middle Temperature	350 to 390	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	370 to 410	°F
Processing (Melt) Temp	370 to 410	°F
Mold Temperature	77 to 150	°F
Injection Pressure	200 to 1000	psi
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 50.0	psi
Screw Speed	50 to 100	rpm

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Injection	Nominal Value	Unit
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).

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