



Sarlink® TPE ML-1180B BLK XRD1

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-1180B BLK is a medium hardness, high density, filled grade suitable for injection molding.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Filled • Good Adhesion • Good Flexibility	• Good Moldability • Good Tear Strength • Good Toughness • High Density	• High Specific Gravity • Low Flow • Medium Hardness • Resilient
Uses	• Automotive Applications • Automotive Interior Parts • Flexible Grips	• General Purpose • Grommets • Knobs	• Rubber Replacement • Soft Touch Applications
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
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ISO 37
Across Flow : 100% Strain	392	psi	
Flow : 100% Strain	450	psi	
Tensile Stress ²			ISO 37
Across Flow : Break	870	psi	
Flow : Break	856	psi	
Tensile Elongation ²			ISO 37
Across Flow : Break	680	%	
Flow : Break	600	%	
Tear Strength ³			ISO 34-1
Across Flow	131	lbf/in	
Flow	120	lbf/in	
Compression Set ⁴			ISO 815
73°F, 70 hr	40	%	
158°F, 24 hr	58	%	
212°F, 24 hr	70	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore A, 3 sec, Injection Molded)	85		ISO 868

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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	-2.3	%	
Flow : 230°F, 1008 hr	-8.6	%	
Across Flow : 100% Strain 230°F, 1008 hr	10	%	
Flow : 100% Strain 230°F, 1008 hr	17	%	
Across Flow : 257°F, 168 hr	-2.5	%	
Flow : 257°F, 168 hr	-12	%	
Across Flow : 100% Strain 257°F, 168 hr	8.4	%	
Flow : 100% Strain 257°F, 168 hr	16	%	
Change in Tensile Strain at Break in Air ⁵			ISO 188
Across Flow : 230°F, 1008 hr	-1.0	%	
Flow : 230°F, 1008 hr	-11	%	
Across Flow : 257°F, 168 hr	1.0	%	
Flow : 257°F, 168 hr	-13	%	
Change in Shore Hardness in Air			ISO 188
Shore A, 230°F, 1008 hr ⁶	2.8		
Shore A, 230°F, 1008 hr ⁷	2.2		
Shore A, 230°F, 1008 hr ⁸	1.1		
Shore A, 257°F, 168 hr ⁶	3.5		
Shore A, 257°F, 168 hr ⁷	2.7		
Shore A, 257°F, 168 hr ⁸	1.3		
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (392°F, 206 sec ⁻¹)	136	Pa·s	ASTM D3835
Additional Information	Nominal Value	Unit	Test Method
Xenon Weatherometer			SAE J1885
Delta E - 1250 kJ	0.100		
Delta E - 2500 kJ	0.400		

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	338 to 383	°F
Middle Temperature	347 to 392	°F
Front Temperature	356 to 401	°F
Nozzle Temperature	374 to 410	°F
Processing (Melt) Temp	374 to 410	°F
Mold Temperature	68 to 86	°F
Injection Rate	Moderate-Fast	
Screw Speed	50 to 100	rpm

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