

Sarlink® TPE ML-1680B BLK X (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
Sarlink ML-1680B BLK X is a general purpose TPE designed for automotive interior applications. This is a medium hardness, medium density grade suitable for injection molding. This high flow TPE exhibits improved moldability and surface appearance.

General Information			
Features	Sunlight Resistant		
	High liquidity		
	Fill		
	Medium density		
	Medium hardness		
	UV absorption		
Uses	Washer		
	Application in Automobile Field		
	Car interior parts		
	General		
Appearance	Black		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.990	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	19	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shore A, 1 second, injection molding	83		ISO 868
Shore A, 5 seconds, injection molding	80		ISO 868
Shore A, 15 seconds, injection molding	79		ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ISO 37
Transverse flow: 100% strain	2.96	MPa	ISO 37
Flow: 100% strain	3.76	MPa	ISO 37
Tensile Stress ²			ISO 37
Transverse flow: Fracture	7.50	MPa	ISO 37

Flow: Fracture	7.70	MPa	ISO 37
Tensile Elongation ³			ISO 37
Transverse flow: Fracture	700	%	ISO 37
Flow: Fracture	650	%	ISO 37
Tear Strength ⁴			ISO 34-1
Transverse flow	35	kN/m	ISO 34-1
Flow	32	kN/m	ISO 34-1
Compression Set ⁵			ISO 815
23°C, 22 hr	37	%	ISO 815
70°C, 22 hr	53	%	ISO 815
90°C, 70 hr	72	%	ISO 815
125°C, 70 hr	100	%	ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air ⁶			ISO 188
Transverse flow: 110°C, 1008 hr	5.0	%	ISO 188
Flow: 110°C, 1008 hr	-1.4	%	ISO 188
Transverse flow: 100% strain 110°C, 1008 hr	9.6	%	ISO 188
Flow: 100% strain 110°C, 1008 hr	16	%	ISO 188
Transverse flow: 125°C, 168 hr	8.1	%	ISO 188
Flow: 125°C, 168 hr	-3.0	%	ISO 188
Transverse flow: 100% strain 125°C, 168 hr	8.4	%	ISO 188
Flow: 100% strain 125°C, 168 hr	16	%	ISO 188
Change in Tensile Strain at Break in Air ⁷			ISO 188
Transverse flow: 110°C, 1008 hr	6.3	%	ISO 188
Flow: 110°C, 1008 hr	-0.50	%	ISO 188
Transverse flow: 125°C, 168 hr	12	%	ISO 188
Flow: 125°C, 168 hr	0.40	%	ISO 188
Change in Shore Hardness in Air			ISO 188
Support a, 110°C, 1008 hr ⁸	2.8		ISO 188
Support a, 110°C, 1008 hr ⁹	3.4		ISO 188
Support a, 110°C, 1008 hr ¹⁰	2.9		ISO 188
Support a, 125°C, 168 hr ¹¹	2.8		ISO 188
Support a, 125°C, 168 hr ¹²	2.1		ISO 188
Support a, 125°C, 168 hr ¹³	1.1		ISO 188
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 206 sec ⁻¹)	120	Pa · s	ASTM D3835
Additional Information	Nominal Value	Unit	Test Method
Xenon Weatherometer			SAE J1885
Delta E - 1250 kJ	0.550		SAE J1885
Delta E - 2500 kJ	1.90		SAE J1885
Injection	Nominal Value	Unit	

Rear Temperature	171 - 193	°C
Middle Temperature	177 - 199	°C
Front Temperature	182 - 204	°C
Nozzle Temperature	188 - 210	°C
Processing (Melt) Temp	188 - 210	°C
Mold Temperature	25.0 - 65.6	°C
Injection Pressure	1.38 - 6.89	MPa
Injection Rate	Moderate-Fast	
Back Pressure	0.172 - 0.345	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 25.4	mm

Injection instructions

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

NOTE

1.	Type 1, 510mm/min
2.	Type 1, 510mm/min
3.	Type 1, 510mm/min
4.	B method, right angle specimen (without cut), 510mm/min
5.	Type a
6.	Type 1
7.	Type 1
8.	5 sec
9.	15 sec
10.	1 sec
11.	15 sec
12.	5 sec
13.	1 sec

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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