Sarlink® TPE ML-1680N NAT (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Sarlink ML-1600 series is a high performance, high flow thermoplastic elastomer series, available in NAT and BLK designed for automotive interior applications. Sarlink ML-1680N NAT is a medium hardness, medium density grade with excellent surface appearance suitable for injection molding.

General Information	
Features	Sunlight Resistant Good formability Good flexibility Good tear strength Good adhesion High liquidity Good chemical resistance Good toughness Fill Excellent appearance Elastic Medium density Medium hardness
Uses	Washer Application in Automobile Field Car interior parts Soft touch application Soft handle Rubber substitution Knob
RoHS Compliance	RoHS compliance
Appearance	Natural color
Forms	Particle
Processing Method	Injection molding

Physical	Nominal Value	Unit	Test Method
Density	0.990	g/cm³	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
Shao A, 110°C, 1008 hr [8]	3.4		ISO 188
Shao A, 110°C, 1008 hr [9]	2.8		ISO 188

Shao A, 110°C, 1008 hr [10]	2.9		ISO 188
Shao A, 125°C, 168 hr [11]	2.8		ISO 188
Shao A, 125°C, 168 hr [12]	2.1		ISO 188
Shao 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

Legal statement

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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 - 66	°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.	15 sec
9.	5 sec
10.	1 sec
11.	15 sec
12.	5 sec
13.	1 sec

Recommended distributors for this material

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