Sarlink® TPE ML-1180N NAT (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Sarlink ML-1100 is a general purpose thermoplastic elastomer series, available in NAT and BLK designed for automotive interior applications. Sarlink ML-1180N NAT is a medium hardness, high density, filled grade suitable for injection molding.

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

Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm³	ISO 1183

Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	14	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ISO 868
Shore A, 1 second, injection molding	81		ISO 868
Shore A, 5 seconds, injection molding	79		ISO 868
Shore A, 15 seconds, injection molding	78		ISO 868
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [1]			ISO 37
Transverse flow: 100% strain	2.55	MPa	ISO 37
Flow: 100% strain	3.40	MPa	ISO 37
Tensile Stress [2]			ISO 37
Transverse flow: Fracture	6.40	MPa	ISO 37
Flow: Fracture	6.30	MPa	ISO 37
Tensile Elongation [3]			ISO 37
Transverse flow: Fracture	730	%	ISO 37
Flow: Fracture	630	%	ISO 37
Tear Strength [4]			ISO 34-1
Transverse flow	31	kN/m	ISO 34-1
Flow	26	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	70	%	ISO 815
125°C, 70 hr	95	%	ISO 815
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air [6]			ISO 188
Transverse flow: 110°C, 1008 hr	-2.3	%	ISO 188
Flow: 110°C, 1008 hr	-8.6	%	ISO 188
Transverse flow: 100% strain 110°C, 1008 hr	10	%	ISO 188
Flow: 100% strain 110°C, 1008 hr	17	%	ISO 188
Transverse flow: 125°C, 168 hr	-2.5	%	ISO 188
Flow: 125°C, 168 hr	-12	%	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	-1.0	%	ISO 188
Flow: 110°C, 1008 hr	-11	%	ISO 188
Transverse flow: 125°C, 168 hr	1.0	%	ISO 188
Flow: 125°C, 168 hr	-13	%	ISO 188
Change in Shore Hardness in Air			ISO 188

Shao A, 110°C, 1008 hr [8]	2.8		ISO 188
Shao A, 110°C, 1008 hr [9]	2.2		ISO 188
Shao A, 110°C, 1008 hr [10]	1.1		ISO 188
Shao A, 125°C, 168 hr [11]	3.5		ISO 188
Shao A, 125°C, 168 hr [12]	2.7		ISO 188
Shao A, 125°C, 168 hr [13]	1.3		ISO 188

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 206 sec^-1)	136	Pa·s	ASTM D3835

Legal statement

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	16 - 32	°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

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