

Monprene® RG-19255

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene MP-1500 is a thermoplastic elastomer designed for the consumer market. Monprene MP-1500 is a clear, medium hardness grade that exhibits low compression set, good abrasion and chemical resistance, and is suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	High liquidity		
	Lubrication		
	Compliance of Food Exposure		
	Medium hardness		
Uses	Packaging		
	Kitchen utensils		
	Pipe fittings		
	Shell		
	Consumer goods application field		
	Toothbrush handle		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.868	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (175°C/2.16 kg)	50	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A	57		ASTM D2240
Shaw A, 5 seconds	55		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	1.85	MPa	ASTM D412
Flow: 100% strain ²	2.24	MPa	ASTM D412

Transverse flow: 300% strain ³	2.61	MPa	ASTM D412
Flow: 300% strain ⁴	3.12	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	2.92	MPa	ASTM D412
Flow: Fracture	3.58	MPa	ASTM D412
Tensile Elongation			ASTM D412
Fracture	650	%	ASTM D412
Transverse flow: Fracture ⁶	440	%	ASTM D412
Flow: Fracture ⁷	450	%	ASTM D412
Tear Strength ⁸			ASTM D624
Transverse flow	19.1	kN/m	ASTM D624
Flow	20.5	kN/m	ASTM D624
Compression Set ⁹			ASTM D395B
23°C, 22 hr	33	%	ASTM D395B
70°C, 22 hr	94	%	ASTM D395B

Injection	Nominal Value	Unit
Rear Temperature	160 - 210	°C
Middle Temperature	166 - 216	°C
Front Temperature	171 - 221	°C
Nozzle Temperature	177 - 227	°C
Processing (Melt) Temp	177 - 227	°C
Mold Temperature	15.6 - 37.8	°C
Injection Pressure	1.38 - 5.52	MPa
Injection Rate	Fast	
Back Pressure	0.172 - 0.689	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).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	182 - 232	°C
Cylinder Zone 2 Temp.	188 - 238	°C
Cylinder Zone 3 Temp.	193 - 243	°C
Cylinder Zone 5 Temp.	199 - 249	°C
Die Temperature	199 - 249	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

NOTE	
1.	Mouth die C, 510mm/min
2.	Mouth die C, 510mm/min
3.	C mold, 510mm/min
4.	C mold, 510mm/min

5.	C mold, 510mm/min
6.	Mouth die C, 510mm/min
7.	Mouth die C, 510mm/min
8.	C mold, 510mm/min
9.	Type 1

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