

Monprene® MP-1584A (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene MP-1584A is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene MP-1584A is a medium hardness, low density grade suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	Low liquidity		
	Lubrication		
	Medium hardness		
Uses	Handle		
	Washer		
	Sporting goods		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.50	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	78		ASTM D2240
Shore A, 5 seconds, injection molding	75		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	4.07	MPa	ASTM D412
Flow: 100% strain ²	5.24	MPa	ASTM D412
Transverse flow: 300% strain ³	5.53	MPa	ASTM D412
Flow: 300% strain ⁴	7.09	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	17.4	MPa	ASTM D412

Flow: Fracture	11.6	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	750	%	ASTM D412
Flow: Fracture	570	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	60.9	kN/m	ASTM D624
Flow	58.0	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	27	%	ASTM D395B
70°C, 22 hr	70	%	ASTM D395B

Injection	Nominal Value	Unit
Rear Temperature	182 - 232	°C
Middle Temperature	188 - 238	°C
Front Temperature	193 - 243	°C
Nozzle Temperature	199 - 249	°C
Processing (Melt) Temp	199 - 249	°C
Mold Temperature	35.0 - 48.9	°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. C mold, 510mm/min
8. Type 1

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