

Monprene® PR-23040

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene PR-23040 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene PR-23040 is a low hardness TPE that exhibits low flow, suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Low density		
	Low liquidity		
	Fill		
	Hardness, low		
Uses	Safety equipment		
	Handle		
	Washer		
	Pipe fittings		
	Consumer goods application field		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.948	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	42		ASTM D2240
Shore A, 5 seconds, injection molding	40		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	1.43	MPa	ASTM D412
Flow: 100% strain ²	1.91	MPa	ASTM D412
Transverse flow: 300% strain ³	2.62	MPa	ASTM D412
Flow: 300% strain ⁴	3.43	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	7.09	MPa	ASTM D412

Flow: Fracture	4.83	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	700	%	ASTM D412
Flow: Fracture	590	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	30.5	kN/m	ASTM D624
Flow	24.0	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	14	%	ASTM D395B
70°C, 22 hr	91	%	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	15.6 - 32.2	°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.	166 - 204	°C
Cylinder Zone 2 Temp.	171 - 210	°C
Cylinder Zone 3 Temp.	177 - 216	°C
Cylinder Zone 5 Temp.	177 - 221	°C
Die Temperature	177 - 221	°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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