

Monprene® CP-18178

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene CP-18178 is a high performance thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene CP-18178 is a high hardness grade that exhibits sunlight resistance and UV absorbing characteristics, suitable for injection molding.

General Information			
Features	Low Specific Gravity		
	Sunlight Resistant		
	Without Fillers		
	Low density		
	smoothness		
	Light stabilization		
	High liquidity		
	Lubrication		
	High hardness		
	UV absorption		
Uses	Safety equipment		
	Handle		
	Kitchen utensils		
	Sporting goods		
	Stationery		
	Consumer goods application field		
Appearance	Natural color		
Forms	Particle		
Processing Method	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)	17	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	80		ASTM D2240
Shore A, 5 seconds, injection molding	78		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	4.63	MPa	ASTM D412
Flow: 100% strain ²	6.36	MPa	ASTM D412

Transverse flow: 300% strain ³	5.87	MPa	ASTM D412
Flow: 300% strain ⁴	7.85	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	9.00	MPa	ASTM D412
Flow: Fracture	9.35	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	580	%	ASTM D412
Flow: Fracture	470	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	51.0	kN/m	ASTM D624
Flow	55.5	kN/m	ASTM D624
Compression Set ⁸ (23°C, 22 hr)	28	%	ASTM D395B

Legal statement

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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).

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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