

Monprene® CP-37180

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene CP-37180 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene CP-37180 is a high hardness grade suitable for injection molding and extrusion.

General Information			
Features	High specific gravity		
	High density		
	smoothness		
	Medium liquidity		
	Lubrication		
	Fill		
	High hardness		
Uses	Safety equipment		
	Handle		
	Kitchen utensils		
	Washer		
	Sporting goods		
	Stationery		
	Consumer goods application field		
	Toothbrush handle		
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	16	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	82		ASTM D2240
Shore A, 5 seconds, injection molding	80		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	3.22	MPa	ASTM D412

Flow: 100% strain ²	4.18	MPa	ASTM D412
Transverse flow: 300% strain ³	3.22	MPa	ASTM D412
Flow: 300% strain ⁴	5.14	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	11.3	MPa	ASTM D412
Flow: Fracture	9.77	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	760	%	ASTM D412
Flow: Fracture	680	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	38.7	kN/m	ASTM D624
Flow	41.3	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	36	%	ASTM D395B
70°C, 22 hr	63	%	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			
无需干燥.但如果湿度过大,则将粒料在150°F (65°C)的温度下干燥2-4小时.			
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			
螺杆转速30 - 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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