

Monprene® SP-12953

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene SP-12953 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene SP-12953 is a medium hardness grade that is UV absorbing and sunlight resistant, suitable for injection molding and extrusion.

General Information			
Features	Sunlight Resistant		
	smoothness		
	Light stabilization		
	Low liquidity		
	Lubrication		
	Fill		
	Medium density		
	Medium hardness		
	UV absorption		
Uses	Safety equipment		
	Handle		
	Washer		
	Pipe fittings		
	Sporting goods		
	Stationery		
	Consumer goods application field		
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.02	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	53		ASTM D2240
Shore A, 5 seconds, injection molding	50		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412

Transverse flow: 100% strain ¹	1.54	MPa	ASTM D412
Flow: 100% strain ²	2.32	MPa	ASTM D412
Transverse flow: 300% strain ³	3.34	MPa	ASTM D412
Flow: 300% strain ⁴	4.45	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	6.28	MPa	ASTM D412
Flow: Fracture	4.94	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	540	%	ASTM D412
Flow: Fracture	390	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	28.9	kN/m	ASTM D624
Flow	22.2	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	17	%	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	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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