

Monprene® SP-14077

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene SP-14077 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene SP-14077 is a medium hardness TPE that exhibits medium flow characteristics and is suitable for injection molding and extrusion.

General Information	
Features	Low Specific Gravity
	Without Fillers
	Low density
	Medium liquidity
	Medium hardness
Uses	Safety equipment
	Handle
	Washer
	Pipe fittings
	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	0.888	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	17	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	77		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	3.06	MPa	ASTM D412
Flow: 100% strain ²	4.43	MPa	ASTM D412
Transverse flow: 300% strain ³	4.48	MPa	ASTM D412

Flow: 300% strain ⁴	6.01	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	9.43	MPa	ASTM D412
Flow: Fracture	7.98	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	670	%	ASTM D412
Flow: Fracture	500	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	44.1	kN/m	ASTM D624
Flow	39.9	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	23	%	ASTM D395B
70°C, 22 hr	92	%	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

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

