

# Monprene® PC-12153

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene® PC-12153 is a thermoplastic elastomer (TPE) material. This product is available in the Asia-Pacific region and is processed by extrusion or injection molding.

Typical application areas include:

- Handle
- safety equipment
- packing
- kitchen utensils
- engineering/industrial accessories

General Information			
Uses	Safety equipment		
	Handle		
	Packaging		
	Kitchen utensils		
	Washer		
	Pipe fittings		
	Sporting goods		
	Shell		
	Stationery		
	Consumer goods application field		
	Toothbrush handle		
	Medical/nursing supplies		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890	g/cm <sup>3</sup>	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
Shaw A	55		ASTM D2240
Shaw A, 5 seconds	53		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	2.50	MPa	ASTM D412

300% strain	5.00	MPa	ASTM D412
Tensile Strength (Break)	8.00	MPa	ASTM D412
Tensile Elongation (Break)	480	%	ASTM D412
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

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#### Recommended distributors for this material

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