



Monprene® PC-12159

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene PC-12159 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene PC-12159 is a low density, medium hardness grade that exhibits excellent anti-vibration characteristics. This grade is suitable for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Colorability • Good Flexibility • Good Flow • Good Mold Release	• Good Tear Strength • High Elasticity • Low Density • Low Specific Gravity	• Lubricated • Medium Hardness • Without Fillers
Uses	• Consumer Applications • Flexible Grips	• Handles • Overmolding	• Rubber Replacement • Toothbrush Handles
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	• Natural Color
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.902		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	18	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	309	psi	
Flow : 100% Strain	458	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	677	psi	
Flow : 300% Strain	902	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	1810	psi	
Flow : Break	1380	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	640	%	
Flow : Break	520	%	
Tear Strength ²			ASTM D624
Across Flow	272	lbf/in	
Flow	218	lbf/in	
Compression Set ³ (73°F, 22 hr)	15	%	ASTM D395B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	60		
Shore A, 5 sec	58		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	380 to 420	°F
Middle Temperature	380 to 420	°F
Front Temperature	380 to 420	°F
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°F
Mold Temperature	60 to 90	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in

Injection Notes

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Notes

¹ Typical properties: these are not to be construed as specifications.

² Die C, 20 in/min

³ Type 1