



Monprene® PC-12235

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene PC-12235 is a high performance thermoplastic elastomer, available in NAT and colors, designed for a variety of personal care consumer product applications requiring a soft, rubber-like feel. Monprene PC-12235 is a low hardness, low density, high flow grade designed for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Good Adhesion • Good Colorability • Good Flexibility	• Good Mold Release • Good Moldability • Good Processability • Halogen Free	• High Flow • Low Density • Low Hardness • Resilient
Uses	• Consumer Applications • Flexible Grips • Gaskets	• Handles • Overmolding • Profiles	• Rubber Replacement • Soft Touch Applications • Toothbrush Handles
Agency Ratings	• FDA		
RoHS Compliance	• RoHS Compliant		
Appearance	• Blue • Light Blue	• Natural Color • Orange	• Pink • Translucent
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.893		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	13	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	123	psi	
Flow : 100% Strain	208	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	667	psi	
Flow : Break	622	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	770	%	
Flow : Break	730	%	
Tear Strength ²			ASTM D624
Across Flow	111	lbf/in	
Flow	129	lbf/in	
Compression Set ³			ASTM D395
73°F, 22 hr	19	%	
158°F, 22 hr	99	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	44		
Shore A, 5 sec	41		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 450	°F
Middle Temperature	370 to 460	°F
Front Temperature	380 to 470	°F
Nozzle Temperature	390 to 480	°F
Processing (Melt) Temp	390 to 480	°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).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	360 to 450	°F
Cylinder Zone 2 Temp.	370 to 460	°F
Cylinder Zone 3 Temp.	380 to 470	°F
Cylinder Zone 4 Temp.	380 to 470	°F
Cylinder Zone 5 Temp.	390 to 480	°F
Die Temperature	390 to 480	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

² Die C, 20 in/min

³ Type 1