

Monprene® PC-12235

Thermoplastic Elastomer

Teknor Apex Company

Message:

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 Information	
Features	Low density
	Workability, good
	Good formability
	Good flexibility
	Good coloring
	Good adhesion
	High liquidity
	Good chemical resistance
	Good demoulding performance
	Halogen-free
	Hardness, low
	Elastic
Uses	Handle
	overmolding
	Washer
	Soft touch application
	Soft handle
	Rubber substitution
	Consumer goods application field
	Profile
	Toothbrush handle
Agency Ratings	FDA not rated
RoHS Compliance	RoHS compliance
Appearance	Light Blue
	Translucent
	Orange
	Pink
	Blue
	Natural color

Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.891	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	13	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	44		ASTM D2240
Shaw A, 5 seconds	41		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
Transverse flow: 100% strain	0.851	MPa	ASTM D412
Flow: 100% strain	1.44	MPa	ASTM D412
Tensile Strength ²			ASTM D412
Transverse flow: Fracture	4.60	MPa	ASTM D412
Flow: Fracture	4.29	MPa	ASTM D412
Tensile Elongation ³			ASTM D412
Transverse flow: Fracture	770	%	ASTM D412
Flow: Fracture	730	%	ASTM D412
Tear Strength ⁴			ASTM D624
Transverse flow	19.5	kN/m	ASTM D624
Flow	22.6	kN/m	ASTM D624
Compression Set ⁵			ASTM D395
23°C, 22 hr	19	%	ASTM D395
70°C, 22 hr	99	%	ASTM D395

Legal statement

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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	16 - 32	°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 4 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. C mold, 510mm/min
2. C mold, 510mm/min
3. C mold, 510mm/min
4. C mold, 510mm/min
5. Type 1

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