

Monprene® WR-12232

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene WR-12232 is a specialty high performance thermoplastic elastomer designed for a variety of consumer product applications including writing instrument grips requiring a soft, rubber-like feel. Monprene WR-12232 is a lubricated, low hardness, low density grade containing an antimicrobial additive. This grade is suitable for both injection molding and extrusion.

General Information	
Additive	Antibacterial (fungicide)
Features	Low Specific Gravity
	Without Fillers
	Low density
	smoothness
	Antibacterial
	Antibacterial property
	Medium liquidity
	Lubrication
Uses	Hardness, low
	Handle
	Soft handle
	Sporting goods
	Stationery
RoHS Compliance	Consumer goods application field
	RoHS compliance
Appearance	Natural color
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)	15	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	35		ASTM D2240
Shore A, 5 seconds, injection molding	32		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412

Transverse flow: 100% strain	0.317	MPa	ASTM D412
Flow: 100% strain	0.869	MPa	ASTM D412
Transverse flow: 300% strain	0.614	MPa	ASTM D412
Flow: 300% strain	1.34	MPa	ASTM D412
Tensile Strength ²			ASTM D412
Transverse flow: Fracture	7.16	MPa	ASTM D412
Flow: Fracture	2.55	MPa	ASTM D412
Tensile Elongation			ASTM D412
Transverse flow: Fracture ³	2000	%	ASTM D412
Flow: Fracture ⁴	690	%	ASTM D412
Tear Strength ⁵			ASTM D624
Transverse flow	16.8	kN/m	ASTM D624
Flow	13.8	kN/m	ASTM D624
Compression Set ⁶			ASTM D395B
23°C, 22 hr	14	%	ASTM D395B
70°C, 22 hr	44	%	ASTM D395B

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	35 - 49	°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.	199 - 249	°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.	510 mm/min	
4.	C mold, 510mm/min	
5.	C mold, 510mm/min	
6.	Type 1	

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