+135-3858-6433 (GuangDong)
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TEKNOR APEX

Monprene® WR-12232

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

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			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Antimicrobial (Fungicide)		
Features	• Bacteria Resistant • Fungus Resistant • Low Density	• Low Hardness • Low Specific Gravity • Lubricated	• Medium Flow • Slip • Without Fillers
Uses	• Consumer Applications • Flexible Grips	• Handles • Sporting Goods	• Writing Instruments
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2]			ASTM D412
Across Flow : 100% Strain	46.0	psi	
Flow : 100% Strain	126	psi	
Tensile Stress [2]			ASTM D412
Across Flow : 300% Strain	89.0	psi	
Flow : 300% Strain	195	psi	
Tensile Strength [2]			ASTM D412
Across Flow : Break	1040	psi	
Flow : Break	370	psi	
Tensile Elongation			ASTM D412
Across Flow : Break [3]	2000	%	
Flow : Break [2]	690	%	
Tear Strength [2]			ASTM D624
Across Flow	96.0	lbf/in	
Flow	79.0	lbf/in	
Compression Set [4]			ASTM D395B
73°F, 22 hr	14	%	
158°F, 22 hr	44	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	35		
Shore A, 5 sec, Injection Molded	32		

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.	390 to 480	°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] 20 in/min

[4] Type 1