



Monprene® SP-12249 NAT

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene SP-12249 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications including sporting goods. Monprene SP-12249 is a medium hardness, low density grade suited for extrusion and 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 Melt Strength	• Good Moldability • Good Processability • Good Toughness • Halogen Free • Low Density	• Low Temperature Resistant • Medium Hardness • Resilient
Uses	• Consumer Applications • Flexible Grips • Handles	• Knobs • Overmolding • Plugs	• Profiles • Rubber Replacement • Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.888		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	0.42	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	207	psi	
Flow : 100% Strain	316	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	1970	psi	
Flow : Break	676	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	900	%	
Flow : Break	630	%	
Tear Strength ³			ASTM D624
Across Flow	127	lbf/in	
Flow	162	lbf/in	
Compression Set ⁴			ASTM D395
73°F, 22 hr	16	%	
158°F, 22 hr	35	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	60		
Shore A, 5 sec	57		

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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	95 to 120	°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 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 Die C, 0.79 in/min

⁴ Type 1