



Monprene® SP-12953

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene SP-12953 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene SP-12953 is a ROHS compliant, medium hardness, medium density grade suitable for both injection molding and extrusion.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Filled • Light Stabilized • Low Flow	• Lubricated • Medium Density • Medium Hardness	• Slip • Sunlight Resistant • UV Absorbing
Uses	• Consumer Applications • Gaskets • Handles	• Safety Equipment • Sporting Goods • Tubing	• Writing Instruments
RoHS Compliance	• RoHS Compliant		
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.02		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	224	psi	
Flow : 100% Strain	337	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	485	psi	
Flow : 300% Strain	645	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	911	psi	
Flow : Break	717	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	540	%	
Flow : Break	390	%	
Tear Strength ²			ASTM D624
Across Flow	165	lbf/in	
Flow	127	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	17	%	
158°F, 22 hr	91	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	53		
Shore A, 5 sec, Injection Molded	50		

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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

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 Type 1