

Monprene® CP-29451 XRD (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
Monprene CP-29451 XRD is a high performance thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene CP-29451 XRD is a lubricated, medium hardness, low density grade that is suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	Low liquidity		
	Lubrication		
	Medium hardness		
Uses	Safety equipment		
	Handle		
	Washer		
	Pipe fittings		
	Sporting goods		
	Stationery		
	Consumer goods application field		
RoHS Compliance	RoHS compliance		
Appearance	Opacity		
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)	2.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	53		ASTM D2240
Shore A, 5 seconds, injection molding	51		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress ¹			ASTM D412
Transverse flow: 100% strain	1.85	MPa	ASTM D412
Flow: 100% strain	3.33	MPa	ASTM D412
Transverse flow: 300% strain	3.77	MPa	ASTM D412
Flow: 300% strain	4.96	MPa	ASTM D412
Tensile Strength ²			ASTM D412
Transverse flow: Fracture	8.09	MPa	ASTM D412
Flow: Fracture	5.16	MPa	ASTM D412
Tensile Elongation ³			ASTM D412
Transverse flow: Fracture	580	%	ASTM D412
Flow: Fracture	480	%	ASTM D412
Tear Strength ⁴			ASTM D624
Transverse flow	40.5	kN/m	ASTM D624
Flow	28.4	kN/m	ASTM D624
Compression Set ⁵			ASTM D395B
23°C, 22 hr	8.3	%	ASTM D395B
70°C, 22 hr	86	%	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 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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