

Monprene® CP-39972 XRD4 (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
Monprene CP-39972 CLR is a high performance thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene CP-39972 CLR is a medium hardness grade that exhibits excellent sunlight resistance and is suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Sunlight Resistant		
	Without Fillers		
	Low density		
	Light stabilization		
	Medium liquidity		
	Medium hardness		
Uses	Safety equipment		
	Handle		
	Kitchen utensils		
	Washer		
	Pipe fittings		
	Sporting goods		
	Stationery		
	Consumer goods application field		
	Toothbrush handle		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.878	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	10	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	74		ASTM D2240

Shaw A, 5 seconds	72		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	3.79	MPa	ASTM D412
Flow: 100% strain ²	5.78	MPa	ASTM D412
Transverse flow: 300% strain ³	4.12	MPa	ASTM D412
Tensile Strength ⁴			ASTM D412
Transverse flow: Fracture	11.0	MPa	ASTM D412
Flow: Fracture	6.80	MPa	ASTM D412
Tensile Elongation ⁵			ASTM D412
Transverse flow: Fracture	2000	%	ASTM D412
Flow: Fracture	210	%	ASTM D412
Tear Strength ⁶			ASTM D624
Transverse flow	59.4	kN/m	ASTM D624
Flow	48.9	kN/m	ASTM D624
Compression Set ⁷ (23°C, 22 hr)	36	%	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	15.6 - 32.2	°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.	Mouth die C, 510mm/min	
2.	Mouth die C, 510mm/min	
3.	C mold, 510mm/min	
4.	C mold, 510mm/min	
5.	Mouth die C, 510mm/min	
6.	C mold, 510mm/min	
7.	Type 1	

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