

Monprene® CP-35124 X1 (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
Monprene CP-35124 X1 is a general purpose clear thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene CP-35124 X1 is a low hardness grade thats suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	Medium liquidity		
	Lubrication		
	Hardness, low		
Uses	Handle		
	Kitchen utensils		
	Washer		
	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	0.868	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	27		ASTM D2240
Shore A, 5 seconds, injection molding	24		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress			ASTM D412
Flow: 100% strain ¹	1.68	MPa	ASTM D412
Transverse flow: 100% strain ²	0.496	MPa	ASTM D412
Flow: 300% strain ³	2.01	MPa	ASTM D412
Transverse flow: 300% strain ⁴	0.883	MPa	ASTM D412
Tensile Strength			ASTM D412
Transverse flow: Fracture ⁵	7.43	MPa	ASTM D412
Flow: Fracture ⁶	7.96	MPa	ASTM D412
Tensile Elongation			ASTM D412
Flow: Fracture ⁷	1500	%	ASTM D412
Transverse flow: Fracture ⁸	800	%	ASTM D412
Tear Strength ⁹			ASTM D624
Transverse flow	27.7	kN/m	ASTM D624
Flow	28.0	kN/m	ASTM D624
Compression Set ¹⁰ (23°C, 22 hr)	13	%	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	35.0 - 48.9	°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.	510 mm/min
2.	Mouth die C, 510mm/min
3.	510 mm/min
4.	C mold, 510mm/min
5.	C mold, 510mm/min
6.	510 mm/min
7.	510 mm/min
8.	Mouth die C, 510mm/min
9.	C mold, 510mm/min
10.	Type 1

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

