

Monprene® IN-12490

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene IN-12490 is a general purpose thermoplastic elastomer designed for the industrial market. Monprene IN-12490 is UV stable and is suitable for injection molding and extrusion.

General Information	
Features	Low Specific Gravity
	Sunlight Resistant
	Without Fillers
	Low density
	smoothness
	Light stabilization
	Low liquidity
	Lubrication
	High hardness
Uses	Safety equipment
	Handle
	Kitchen utensils
	Washer
	Pipe fittings
	Sporting goods
	Stationery
	Consumer goods application field
	Toothbrush handle
Appearance	Natural color
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)	1.5	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	1.6	%	ASTM D955
Transverse flow	1.1	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	92		ASTM D2240
Shore A, 5 seconds, injection molding	90		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	100	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	4.96	MPa	ASTM D412
Flow: 100% strain ²	5.94	MPa	ASTM D412
Transverse flow: 300% strain ³	6.25	MPa	ASTM D412
Flow: 300% strain ⁴	7.45	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	22.2	MPa	ASTM D412
Flow: Fracture	14.4	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	790	%	ASTM D412
Flow: Fracture	660	%	ASTM D412
Compression Set ⁷			ASTM D395B
23°C, 22 hr	37	%	ASTM D395B
70°C, 22 hr	54	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	65.0	°C	ASTM D1525
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			
无需干燥.但如果湿度过大,则将粒料在150°F (65°C)的温度下干燥2-4小时.			
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

螺杆转速30 - 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.	C mold, 510mm/min
6.	Mouth die C, 510mm/min
7.	Type 1

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