

Monprene® IN-12090

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene IN-12090 is a general purpose thermoplastic elastomer designed for the industrial market. Monprene IN-12090 is a low density, high hardness TPE that is suitable for injection molding and extrusion.

General Information	
Features	Low Specific Gravity
	Without Fillers
	Low density
	Low liquidity
	High hardness
Uses	Handle
	Washer
	Industrial application
	Pipe fittings
Appearance	Translucent
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
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	91		ASTM D2240
Shaw A, 5 seconds	90		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	4.27	MPa	ASTM D412
Flow: 100% strain ²	5.34	MPa	ASTM D412
Transverse flow: 300% strain ³	5.54	MPa	ASTM D412
Flow: 300% strain ⁴	6.94	MPa	ASTM D412
Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	20.7	MPa	ASTM D412
Flow: Fracture	13.3	MPa	ASTM D412

Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	830	%	ASTM D412
Flow: Fracture	670	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	63.4	kN/m	ASTM D624
Flow	59.5	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	30	%	ASTM D395B
70°C, 22 hr	63	%	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			
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.	C mold, 510mm/min		
6.	Mouth die C, 510mm/min		
7.	C mold, 510mm/min		
8.	Type 1		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

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

