

Monprene® IN-22059

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene IN-22059 is a high performance thermoplastic elastomer designed for the industrial market including seals and gaskets. Monprene IN-22059 is a medium hardness, medium density grade that is suitable for injection molding or extrusion.

General Information			
Features	Low liquidity		
	Fill		
	Medium density		
	Medium hardness		
Uses	Handle		
	Washer		
	Industrial application		
	Pipe fittings		
	Consumer goods application field		
RoHS Compliance	RoHS compliance		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.998	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	61		ASTM D2240
Shore A, 5 seconds, injection molding	59		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
Transverse flow: 100% strain	1.74	MPa	ASTM D412
Flow: 100% strain	3.25	MPa	ASTM D412
Transverse flow: 300% strain	2.80	MPa	ASTM D412
Flow: 300% strain	3.71	MPa	ASTM D412
Tensile Strength ²			ASTM D412
Transverse flow: Fracture	9.05	MPa	ASTM D412

Flow: Fracture	4.32	MPa	ASTM D412
Tensile Elongation ³			ASTM D412
Transverse flow: Fracture	750	%	ASTM D412
Flow: Fracture	310	%	ASTM D412
Tear Strength ⁴			ASTM D624
Transverse flow	29.8	kN/m	ASTM D624
Flow	22.9	kN/m	ASTM D624
Compression Set ⁵			ASTM D395B
23°C, 22 hr	18	%	ASTM D395B
70°C, 22 hr	38	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -60.0	°C	ASTM D746

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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