

Monprene® MP-1645A

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene MP-1645A is a high performance thermoplastic elastomer, available in Nat, BLK, and colors, designed for a variety of consumer and industrial product applications requiring a soft, rubber-like feel. Monprene MP-1645A is a low density, medium hardness grade exhibiting good tear strength and suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Low density		
	Flexibility at low temperatures		
	Workability, good		
	Good tear strength		
	Good coloring		
	Good adhesion		
	Ozone resistance		
	Good chemical resistance		
	Medium hardness		
Uses	Safety equipment		
	Handle		
	Washer		
	Soft handle		
	Sporting goods		
	Rubber substitution		
	Consumer goods application field		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
	Black		
	Available colors		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.898	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	14	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness			ASTM D2240
Shaw A	79		ASTM D2240
Shaw A, 5 seconds	77		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow			ASTM D412
50% strain	4.01	MPa	ASTM D412
100% strain	4.65	MPa	ASTM D412
200% strain	5.52	MPa	ASTM D412
300% strain	6.47	MPa	ASTM D412
Tensile Strength - Flow (Break)	12.0	MPa	ASTM D412
Tensile Elongation - Flow (Break)	680	%	ASTM D412
Tear Strength	50.9	kN/m	ASTM D624
Compression Set (23°C)	25	%	ASTM D395

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 4 Temp.	193 - 243	°C
Cylinder Zone 5 Temp.	199 - 249	°C
Die Temperature	199 - 249	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

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