



Monprene® MP-1645A

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Good Adhesion • Good Colorability • Good Processability	• Good Tear Strength • Low Density • Low Specific Gravity • Low Temperature Flexibility	• Medium Hardness • Ozone Resistant
Uses	• Consumer Applications • Flexible Grips • Gaskets	• Handles • Rubber Replacement • Safety Equipment	• Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Colors Available	• Translucent
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.900		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	14	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow (50% Strain)	582	psi	ASTM D412
Tensile Stress - Flow (100% Strain)	674	psi	ASTM D412
Tensile Stress - Flow (200% Strain)	801	psi	ASTM D412
Tensile Stress - Flow (300% Strain)	938	psi	ASTM D412
Tensile Strength - Flow (Break)	1740	psi	ASTM D412
Tensile Elongation - Flow (Break)	680	%	ASTM D412
Tear Strength	291	lbf/in	ASTM D624
Compression Set (73°F)	25	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	79		
Shore A, 5 sec	77		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 450	°F
Middle Temperature	370 to 460	°F
Front Temperature	380 to 470	°F
Nozzle Temperature	390 to 480	°F
Processing (Melt) Temp	390 to 480	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in

Injection Notes

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.	360 to 450	°F
Cylinder Zone 2 Temp.	370 to 460	°F
Cylinder Zone 3 Temp.	380 to 470	°F
Cylinder Zone 4 Temp.	380 to 470	°F
Cylinder Zone 5 Temp.	390 to 480	°F
Die Temperature	390 to 480	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

¹ Typical properties: these are not to be construed as specifications.