

# Medalist® MD-310

Teknor Apex Company - Thermoplastic Elastomer

Thursday, September 10, 2009

## General Information

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	• South America
Uses	• Medical/Healthcare Applications	• Pharmaceuticals	• Safety Equipment
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

## ASTM and ISO Properties <sup>1</sup>

Physical	Nominal Value Unit	Test Method
Specific Gravity	0.928 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	45 g/10 min	ASTM D1238
Molding Shrinkage - Flow	1.7 %	ASTM D955
Molding Shrinkage - Across Flow	2.0 %	ASTM D955
Elastomers	Nominal Value Unit	Test Method
Tensile Stress (100% Strain)	2.21 MPa	ASTM D412
Tensile Stress (200% Strain)	2.48 MPa	ASTM D412
Tensile Stress (300% Strain)	2.93 MPa	ASTM D412
Tensile Strength (Break)	6.89 MPa	ASTM D412
Tensile Elongation (Break)	730 %	ASTM D412
Tear Strength	28.0 kN/m	ASTM D624
Compression Set (23°C, 22.0 hr)	54 %	ASTM D395
Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore A)	45	ASTM D2240

## Processing Information

Injection	Nominal Value Unit
Drying Temperature	60.0 °C
Drying Time	2.0 to 4.0 hr
Rear Temperature	127 to 149 °C
Middle Temperature	138 to 160 °C
Front Temperature	149 to 171 °C
Nozzle Temperature	171 to 193 °C
Processing (Melt) Temp	171 to 193 °C
Mold Temperature	21.1 to 37.8 °C
Injection Pressure	1.38 to 5.52 MPa
Back Pressure	0.172 to 0.689 MPa
Screw Speed	50 to 100 rpm
Cushion	3.81 to 25.4 mm

### Injection Notes

Moisture can degrade the material. Drying is suggested. This can be accomplished by placing the material in a desiccant dryer for 2 to 4 hours at 140°F.

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<b>Extrusion</b>	<b>Nominal Value</b>	<b>Unit</b>
Cylinder Zone 1 Temp.	138 to 149	°C
Cylinder Zone 2 Temp.	149 to 160	°C
Cylinder Zone 3 Temp.	160 to 182	°C
Cylinder Zone 5 Temp.	171 to 193	°C
Die Temperature	182 to 204	°C

## Extrusion Notes

Screw Speed: 30 to 100 rpm

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.