

# Medalist® MD-417A

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, February 16, 2011

## General Information

General			
Generic Name	• Thermoplastic Elastomer (TPE)		
Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Uses	• Medical/Healthcare Applications	• Pharmaceuticals	• Safety Equipment
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

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

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	5.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow (300% Strain)	400	psi	ASTM D412
Tensile Strength - Flow (Break)	1200	psi	ASTM D412
Tensile Elongation - Flow (Break)	750	%	ASTM D412
Tear Strength	174	lbf/in	ASTM D624
Compression Set (73°F, 22.0 hr)	21	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	60		
Shore A, 10 sec	58		

## Processing Information

Injection	Nominal Value	Unit
Rear Temperature	260 to 300	°F
Middle Temperature	280 to 320	°F
Front Temperature	300 to 340	°F
Nozzle Temperature	340 to 380	°F
Processing (Melt) Temp	340 to 380	°F
Mold Temperature	70.0 to 100	°F
Injection Pressure	200 to 800	psi
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.	280 to 300	°F
Cylinder Zone 2 Temp.	300 to 320	°F

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Extrusion	Nominal Value	Unit
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 5 Temp.	340 to 380	°F
Die Temperature	360 to 400	°F

### Extrusion Notes

Screw Speed: 30 to 100 rpm

### Notes

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