



# Medalist® MD-50293

Teknor Apex Company - Thermoplastic Elastomer

## General Information

### Product Description

The Medalist MD-50200 Series is a high performance thermoplastic elastomer series, designed to be a sustainable alternative to flexible PVC for medical tubing and film. Medalist MD-50293 is a low density, high hardness, clear grade, available in Nat and color-matched, intended for use in medical and healthcare applications, with excellent processability and throughput in extruded tubing.

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclavable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability	• Good Processability • Halogen Free • High Clarity • High Hardness • High Purity	• Kink Resistant • Low Density • Low Specific Gravity • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Clear Sheet • Film	• Hose • Medical/Healthcare Applications	• Pharmaceuticals • Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	
Forms	• Pellets		
Processing Method	• Cast Film	• Extrusion	• Injection Molding

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

Physical	Nominal Value	Unit	Test Method
Density / 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 (100% Strain)	1480	psi	ASTM D412
Tensile Stress - Flow (300% Strain)	1530	psi	ASTM D412
Tensile Strength - Flow (Break)	2200	psi	ASTM D412
Tensile Elongation - Flow (Break)	600	%	ASTM D412
Tear Strength	400	lbf/in	ASTM D624
Compression Set (73°F, 22 hr)	12	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	95		
Shore A, 5 sec	93		
Shore D	36		

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### 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 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
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 4 Temp.	340 to 380	°F
Cylinder Zone 5 Temp.	340 to 380	°F
Die Temperature	360 to 400	°F

### Extrusion Notes

Screw Speed: 30 to 100 rpm;

Screen Pack Recommendation:

60/200/200/60 to 60/200/400/400/200/60 mesh size.

### Notes

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