

# Medalist® MD-50357

Thermoplastic Elastomer

Teknor Apex Company

Message:

Medalist MD-50357 is intended for use in medical and healthcare applications, particularly for extruded medical tubing. Medalist MD-50357 is a low density, medium hardness, clear grade designed to be a sustainable alternative to flexible PVC for medical tubing. This grade is suitable for both injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	High purity		
	Low density		
	Pressure cooker disinfection		
	Ethylene oxide disinfection		
	Anti-gamma radiation		
	Adhesiveness		
	Good processing stability		
	Kink resistance		
	Definition, high		
	No kinetic components		
	Medium hardness		
Uses	Drug		
	Medical/nursing supplies		
Agency Ratings	ISO 10993 Part 5		
	ISO 13485		
RoHS Compliance	RoHS compliance		
Appearance	Light Blue		
	Available colors		
	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.0	g/10 min	ASTM D1238

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	60		ASTM D2240
Shaw A, 5 seconds	58		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
50% strain	1.93	MPa	ASTM D412
100% strain	2.31	MPa	ASTM D412
300% strain	3.62	MPa	ASTM D412
Tensile Strength (Break)	9.14	MPa	ASTM D412
Tensile Elongation (Break)	750	%	ASTM D412
Tear Strength	36.8	kN/m	ASTM D624
Compression Set			ASTM D395
23°C, 22 hr	24	%	ASTM D395
70°C, 22 hr	88	%	ASTM D395

#### Legal statement

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Injection	Nominal Value	Unit
Rear Temperature	149 - 171	°C
Middle Temperature	171 - 193	°C
Front Temperature	193 - 216	°C
Nozzle Temperature	193 - 216	°C
Processing (Melt) Temp	193 - 216	°C
Mold Temperature	21 - 52	°C
Back Pressure	0.345 - 1.03	MPa
Screw Speed	50 - 100	rpm
Cushion	3.56 - 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.	171 - 188	°C
Cylinder Zone 2 Temp.	182 - 196	°C
Cylinder Zone 3 Temp.	185 - 204	°C
Cylinder Zone 4 Temp.	188 - 210	°C
Cylinder Zone 5 Temp.	188 - 210	°C
Die Temperature	188 - 210	°C

#### Extrusion instructions

Screw Speed: 30 to 100 rpmScreen Pack Recommendation: 60/200/200/60 to 60/200/400/400/200/60 mesh size

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#### Recommended distributors for this material

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