



Medalist® MD-150

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Medalist MD-150 is a high performance thermoplastic elastomer intended for use in medical and healthcare applications including high clarity tubing. Medalist MD-150 is a medium hardness, low density grade that is suitable for both injection molding and extrusion.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Ethylene Oxide Sterilizable	• High Clarity • Low Density	• Medium Hardness • Radiation Sterilizable
Uses	• Medical/Healthcare Applications • Pharmaceuticals		
Agency Ratings	• ISO 10993-5		
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.033	in/in	ASTM D955
Molding Shrinkage - Across Flow	0.021	in/in	ASTM D955
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	350	psi	ASTM D412
Tensile Stress (200% Strain)	430	psi	ASTM D412
Tensile Stress (300% Strain)	520	psi	ASTM D412
Tensile Strength (Break)	1150	psi	ASTM D412
Tensile Elongation (Break)	700	%	ASTM D412
Tear Strength	235	lbf/in	ASTM D624
Compression Set			ASTM D395
73°F, 22 hr	18	%	
158°F, 22 hr	95	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	54		
Shore A, 5 sec	52		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-76.0	°F	ASTM D746
Aging	Nominal Value	Unit	Test Method
Continuous Upper Temperature Resistance	185	°F	SAE J2236

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	280 to 320	°F
Middle Temperature	320 to 360	°F
Front Temperature	340 to 380	°F
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°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 5 Temp.	340 to 380	°F
Die Temperature	360 to 400	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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