



Medalist® MD-12250

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Medalist(R) MD-12250 is a clear high performance thermoplastic elastomer intended for use in medical and healthcare applications. Medalist(R) MD-12250 is a low density, medium hardness grade that is suitable for extrusion and injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	
Features	• Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Moldability	• Good Processability • Good Sterilizability • Halogen Free • Kink Resistant	• Low Density • Medium Hardness • Radiation Sterilizable • Resilient
Uses	• Bladders • Closures • Film	• Gaskets • Medical/Healthcare Applications • Overmolding	• Pharmaceuticals • Tubing
Agency Ratings	• ISO 10993 Part 5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent • Colors Available	• Natural Color • White	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain)	175	psi	ASTM D412
Tensile Stress (100% Strain)	230	psi	ASTM D412
Tensile Stress (300% Strain)	520	psi	ASTM D412
Tensile Strength (Break)	1880	psi	ASTM D412
Tensile Elongation (Break)	700	%	ASTM D412
Tear Strength	205	lbf/in	ASTM D624
Compression Set (73°F, 22 hr)	17	%	ASTM D395B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	53		
Shore A, 5 sec	50		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 450	°F
Middle Temperature	370 to 460	°F
Front Temperature	380 to 470	°F
Nozzle Temperature	390 to 480	°F
Processing (Melt) Temp	390 to 480	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
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.	360 to 450	°F
Cylinder Zone 2 Temp.	370 to 460	°F
Cylinder Zone 3 Temp.	380 to 470	°F
Cylinder Zone 4 Temp.	365 to 440	°F
Cylinder Zone 5 Temp.	390 to 480	°F
Die Temperature	390 to 480	°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

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