



Medalist® MD-10353

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Medalist MD-10353 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-10353 is a medium hardness, low density, halogen-free grade that can be sterilized. This grade 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 • Good Melt Strength	• Halogen Free • High Clarity • Low Density	• Medium Hardness • Radiation Sterilizable
Uses	• Hospital Goods • Medical Devices	• Medical/Healthcare Applications • Pharmaceuticals	• Rubber Replacement • Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	8.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (100% Strain)	310	psi	ASTM D412
Tensile Stress ² (300% Strain)	452	psi	ASTM D412
Tensile Strength ² (Break)	1650	psi	ASTM D412
Tensile Elongation ² (Break)	890	%	ASTM D412
Tear Strength ²	221	lbf/in	ASTM D624
Compression Set ³ (73°F, 22 hr)	19	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	55		
Shore A, 5 sec, Injection Molded	53		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°F	ASTM D746

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	300 to 340	°F
Middle Temperature	340 to 380	°F
Front Temperature	380 to 440	°F
Nozzle Temperature	380 to 440	°F
Processing (Melt) Temp	380 to 440	°F
Mold Temperature	70 to 125	°F
Back Pressure	50.0 to 150	psi
Screw Speed	50 to 100	rpm
Cushion	0.140 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.	340 to 370	°F
Cylinder Zone 2 Temp.	360 to 385	°F
Cylinder Zone 3 Temp.	365 to 400	°F
Cylinder Zone 4 Temp.	400 to 440	°F
Cylinder Zone 5 Temp.	400 to 440	°F
Die Temperature	400 to 440	°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.

² Die C, 20 in/min

³ Type 1