Medalist® MD-555

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-555 is a high performance thermoplastic elastomer intended for use in medical and healthcare applications, especially medical tubing. Medalist MD-555 is a medium hardness, low density, clear grade designed to be a sustainable alternative to flexible PVC 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	• Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Processability	• Halogen Free • High Clarity • High Purity • Low Density	• Low Specific Gravity • Medium Hardness • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Film • Medical/Healthcare Applications	• Pharmaceuticals • Rubber Replacement	• Tubing
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Cast Film	• Extrusion	• Injection Molding

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)	4.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (50% Strain)	220	psi	ASTM D412
Tensile Stress (100% Strain)	270	psi	ASTM D412
Tensile Stress (300% Strain)	415	psi	ASTM D412
Tensile Strength (Break)	1340	psi	ASTM D412
Tensile Elongation (Break)	890	%	ASTM D412
Tear Strength	177	lbf/in	ASTM D624
Compression Set (73°F, 22 hr)	9.1	%	ASTM D395
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	55		
Shore A, 5 sec	53		

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	260 to 300	°F

Revision Date: 2/20/2020

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Injection	Nominal Value	Unit
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.	340 to 370	°F
Cylinder Zone 2 Temp.	360 to 385	°F
Cylinder Zone 3 Temp.	365 to 400	°F
Cylinder Zone 4 Temp.	365 to 400	°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.

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