Medalist® MD-50263 AP NAT (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

The Medalist MD-50200 Series is a high performance thermoplastic elastomer series, designed to be a sustainable alternative to flexible PVC for medical tubing and film. Medalist MD-50263 is a low density, medium hardness, clear grade, available in Nat and color-matched, intended for use in medical and healthcare applications, 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 Colorability • Good Processability	• Halogen Free • High Clarity • High Purity • Kink Resistant • Low Density	• Medium Hardness • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Clear Sheet • Film • Hose	• Medical/Healthcare Applications • Pharmaceuticals • Rubber Replacement	• Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	
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)	4.5	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Oxygen Permeability			ASTM D3985
73°F, 40 mil, 35% RH	1400	cm³·mil/100in²/atm/24 hr	
73°F, 40 mil, 90% RH	1300	cm³·mil/100in²/atm/24 hr	
Oxygen Transmission Rate (Wet)			ASTM F1927
73°F, 40 mil, 35% RH	33.3	cm³/100 in²/24 hr	
73°F, 40 mil, 90% RH	31.5	cm³/100 in²/24 hr	
Water Vapor Transmission Rate			ASTM F1249
100°F, 100% RH, 1.0 mil	3.3	g/100 in²/24 hr	

Revision Date: 6/30/2021

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Elastomers	Nominal Value	Unit	Test Method
Tensile Stress [2] (50% Strain)	325	psi	ASTM D412
Tensile Stress [2] (100% Strain)	385	psi	ASTM D412
Tensile Stress [2] (300% Strain)	615	psi	ASTM D412
Tensile Strength [2] (Break)	1720	psi	ASTM D412
Tensile Elongation [2] (Break)	630	%	ASTM D412
Tear Strength [2]	247	lbf/in	ASTM D624
Compression Set [3]			ASTM D395
73°F, 22 hr	18	%	
158°F, 22 hr	86	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	67		
Shore A, 5 sec	65		

Legal Statement

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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.	370 to 420	°F
Cylinder Zone 5 Temp.	400 to 440	°F
Adapter Temperature	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.

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Notes

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

[2] Die C, 20 in/min

[3] Type 1

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