Medalist® MD-50365 AP XRD1 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-50365 AP XRD1 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-50365 AP XRD1 is a medium hardness, low density, RoHS compliant grade that can be sterilized and is suitable for injection molding and extrusion.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Bondability • Clean/High Purity • Ethylene Oxide Sterilizable	• Good Processing Stability • Kink Resistant • Low Density • Low Specific Gravity	• Medium Hardness • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Medical Devices • Medical/Healthcare Applications	• Pharmaceuticals • Tubing	
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color	• Translucent	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.892		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	580	psi	ASTM D412
Tensile Stress (300% Strain)	870	psi	ASTM D412
Tensile Strength (Break)	1120	psi	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	72		
Shore A, 5 sec	70		

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 420	°F

Revision Date: 9/6/2024

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Injection	Nominal Value	Unit
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°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.	280 to 320	°F
Cylinder Zone 2 Temp.	310 to 350	°F
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 4 Temp.	330 to 370	°F
Cylinder Zone 5 Temp.	370 to 410	°F
Adapter Temperature	340 to 360	°F
Melt Temperature	330 to 360	°F
Die Temperature	340 to 410	°F
Screw L/D Ratio	24.0:1.0 to 32.0:1.0	

Extrusion Notes

Minimum 24:1 L/D, preferably 30:1 L/D.

High shear screw preferred, barrier screw with Maddock mixing end is recommended.

Typical Screen Pack: 20/60/150/150/60/20, up to 250 mesh.

Extruder Head Pressure: 1000-1500 psi

Notes

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

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