Medalist® MD-42245 XRD1 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-42245 XRD1 is designed for medical and healthcare applications requiring high elasticity and excellent melt strength. Medalist MD-42245 XRD1 is a medium hardness, low density, translucent high performance thermoplastic elastomer, available in NAT and colors, which can be sterilized, exhibits excellent adhesion to polypropylene and is suited for extrusion and injection molding.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Melt Strength • Good Moldability	• Good Sterilizability • Good Toughness • Halogen Free • Low Density • Low Flow • Low Specific Gravity	• Lubricated • Medium Hardness • Radiation Sterilizable • Resilient • Without Fillers
Uses	• Bushings • Closures • Disposable Hospital Goods • Flexible Grips	• Grommets • Knobs • Medical/Healthcare Applications • Pharmaceuticals	• Plugs • Rubber Replacement
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• 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)	0.50	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (50% Strain)	125	psi	ASTM D412
Tensile Stress [2] (100% Strain)	150	psi	ASTM D412
Tensile Stress (300% Strain)	250	psi	ASTM D412
Tensile Strength [2] (Break)	700	psi	ASTM D412
Tensile Elongation [2] (Break)	700	%	ASTM D412
Tear Strength [2]	125	lbf/in	ASTM D624
Compression Set			ASTM D395
73°F, 22 hr [3]	16	%	
158°F, 22 hr	33	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	46		
Shore A, 5 sec	44		

Revision Date: 5/22/2019

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	320 to 491	°F
Middle Temperature	360 to 491	°F
Front Temperature	380 to 491	°F
Nozzle Temperature	360 to 491	°F
Processing (Melt) Temp	360 to 491	°F
Mold Temperature	80 to 140	°F
Injection Rate	Moderate-Fast	
Back Pressure	50.0 to 150	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 0.500	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.	380 to 420	°F
Cylinder Zone 5 Temp.	400 to 441	°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

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