

Medalist® MD-12243

Thermoplastic Elastomer

Teknor Apex Company

Message:

Medalist MD-12243 is designed for medical and healthcare applications requiring high elasticity and tensile strength. Medalist MD-12243 is a medium hardness, low density, translucent thermoplastic elastomer that can be sterilized and is suitable for injection molding and extrusion.

General Information			
Features	Low Specific Gravity		
	Low density		
	Pressure cooker disinfection		
	Good disinfection		
	Ethylene oxide disinfection		
	Anti-gamma radiation		
	Workability, good		
	Good coloring		
	Good adhesion		
	Good chemical resistance		
	Halogen-free		
	Medium hardness		
Uses	Handle		
	Soft handle		
	Rubber substitution		
	Drug		
	Medical/nursing supplies		
Agency Ratings	ISO 10993 Part 5		
	ISO 13485		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm ³	ASTM D792

Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	0.50	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A	45		ASTM D2240
Shaw A, 5 seconds	43		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	1.41	MPa	ASTM D412
200% strain	2.07	MPa	ASTM D412
300% strain	2.76	MPa	ASTM D412
Tensile Strength (Break)	6.76	MPa	ASTM D412
Tensile Elongation (Break)	610	%	ASTM D412
Tear Strength	24.4	kN/m	ASTM D624
Compression Set			ASTM D395B
23°C, 22 hr	11	%	ASTM D395B
70°C, 22 hr	28	%	ASTM D395B

Legal statement

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Injection	Nominal Value	Unit
Rear Temperature	149 - 171	°C
Middle Temperature	171 - 193	°C
Front Temperature	193 - 227	°C
Nozzle Temperature	193 - 227	°C
Processing (Melt) Temp	193 - 227	°C
Mold Temperature	21 - 52	°C
Back Pressure	0.345 - 1.03	MPa
Screw Speed	50 - 100	rpm
Cushion	3.56 - 25.4	mm

Injection instructions

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.	171 - 188	°C
Cylinder Zone 2 Temp.	182 - 196	°C
Cylinder Zone 3 Temp.	185 - 204	°C
Cylinder Zone 4 Temp.	185 - 204	°C
Cylinder Zone 5 Temp.	204 - 227	°C
Die Temperature	204 - 227	°C

Extrusion instructions

Screw Speed: 30 to 100 rpmScreen Pack Recommendation:60/200/200/60 to 60/200/400/400/200/60 mesh size

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