

Medalist® MD-12368

Thermoplastic Elastomer

Teknor Apex Company

Message:

Medalist(R)MD-12368 is a high performance thermoplastic elastomer intended for use in medical and healthcare applications. Medalist(R)MD-12368 is a low density, medium hardness, clear grade designed suitable for extrusion, extruded tubing, and injection molding.

General Information	
Features	Low density Radiation disinfection Pressure cooker disinfection Good disinfection Ethylene oxide disinfection Anti-gamma radiation Workability, good Good formability Good strength Good flexibility Good tear strength Good coloring Good wear resistance Good adhesion Good chemical resistance Good toughness Halogen-free Elastic Medium hardness
Uses	Disposable Hospital Goods Plug Diaphragm Pipe fittings Soft handle Shell Rubber substitution Drug Medical/nursing supplies
Agency Ratings	ISO 10993 Part 5 ISO 13485

RoHS Compliance	RoHS compliance
Appearance	Available colors Clear/transparent 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)	1.0	g/10 min	ASTM D1238

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	74		ASTM D2240
Shaw A, 5 seconds	72		ASTM D2240

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow ¹			ASTM D412
100% strain	2.86	MPa	ASTM D412
300% strain	4.83	MPa	ASTM D412
Tensile Strength - Flow ² (Break)	14.3	MPa	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength - Flow ³	46.8	kN/m	ASTM D624
Compression Set ⁴ (23°C, 22 hr)	19	%	ASTM D395

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-60.0	°C	ASTM D746

Legal statement

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Injection	Nominal Value	Unit
Rear Temperature	127 - 149	°C
Middle Temperature	138 - 160	°C
Front Temperature	149 - 171	°C
Nozzle Temperature	171 - 193	°C
Processing (Melt) Temp	171 - 193	°C
Mold Temperature	21 - 38	°C
Injection Pressure	1.38 - 5.52	MPa

Back Pressure	0.172 - 0.689	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 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.	138 - 149	°C
Cylinder Zone 2 Temp.	149 - 160	°C
Cylinder Zone 3 Temp.	160 - 182	°C
Cylinder Zone 4 Temp.	160 - 182	°C
Cylinder Zone 5 Temp.	171 - 193	°C
Die Temperature	182 - 204	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

NOTE

1. C mold, 510mm/min
2. C mold, 510mm/min
3. C mold, 510mm/min
4. Type 1

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