



Medalist® MD-12368

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant • Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability • Good Flexibility	• Good Moldability • Good Processability • Good Sterilizability • Good Strength • Good Tear Strength • Good Toughness • Halogen Free	• Low Density • Medium Hardness • Radiation (Gamma) Resistant • Radiation Sterilizable • Resilient
Uses	• Closures • Diaphragms • Disposable Hospital Goods	• Flexible Grips • Medical/Healthcare Applications • Pharmaceuticals	• Plugs • Rubber Replacement • Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	• Natural Color
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow ² (100% Strain)	415	psi	ASTM D412
Tensile Stress - Flow ² (300% Strain)	700	psi	ASTM D412
Tensile Strength - Flow ² (Break)	2080	psi	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength - Flow ²	267	lbf/in	ASTM D624
Compression Set ³ (73°F, 22 hr)	19	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	74		
Shore A, 5 sec	72		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-76.0	°F	ASTM D746

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	260 to 300	°F
Middle Temperature	280 to 320	°F
Front Temperature	300 to 340	°F
Nozzle Temperature	340 to 380	°F
Processing (Melt) Temp	340 to 380	°F
Mold Temperature	70 to 100	°F
Injection Pressure	200 to 800	psi
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 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 300	°F
Cylinder Zone 2 Temp.	300 to 320	°F
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 4 Temp.	320 to 360	°F
Cylinder Zone 5 Temp.	340 to 380	°F
Die Temperature	360 to 400	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

² Die C, 20 in/min

³ Type 1