

Medalist® MD-12368

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

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 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / 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
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow ² (100% Strain)	2.86	MPa	ASTM D412
Tensile Stress - Flow ² (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 ²	46.8	kN/m	ASTM D624
Compression Set ³ (23°C, 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	-60.0	°C	ASTM D746

Revision Date: 6/1/2016

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

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Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	127 to 149	°C
Middle Temperature	138 to 160	°C
Front Temperature	149 to 171	°C
Nozzle Temperature	171 to 193	°C
Processing (Melt) Temp	171 to 193	°C
Mold Temperature	21 to 38	°C
Injection Pressure	1.38 to 5.52	MPa
Back Pressure	0.172 to 0.689	MPa
Screw Speed	50 to 100	rpm
Cushion	3.81 to 25.4	mm

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.	138 to 149	°C
Cylinder Zone 2 Temp.	149 to 160	°C
Cylinder Zone 3 Temp.	160 to 182	°C
Cylinder Zone 4 Temp.	160 to 182	°C
Cylinder Zone 5 Temp.	171 to 193	°C
Die Temperature	182 to 204	°C

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

² Die C, 510 mm/min

³ Type 1

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