Medalist® MD-12372

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Medalist MD-12372 is a high performance thermoplastic elastomer with a medium hardness, low density, halogen-free grade that can be sterilized. Medalist MD-12372 was specifically designed for use in medical and healthcare applications, particularly for extruded medical tubing and injection molding applications for medical devices.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Ethylene Oxide Sterilizable • Good Processability	• High Purity • Kink Resistant • No Animal Derived Components	• Radiation (Gamma) Resistant
Uses	• Medical/Healthcare Applications	• Pharmaceuticals	
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.888	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.5	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (50% Strain)	3.07	MPa	ASTM D412
Tensile Stress (100% Strain)	3.65	MPa	ASTM D412
Tensile Stress (300% Strain)	5.86	MPa	ASTM D412
Tensile Strength (Break)	16.9	MPa	ASTM D412
Tensile Elongation (Break)	690	%	ASTM D412
Tear Strength	51.8	kN/m	ASTM D624
Compression Set			ASTM D395
23°C, 22 hr	23	%	
70°C, 22 hr	81	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	74		
Shore A, 5 sec	72		

Legal Statement

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 purchaser assumes 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 others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Revision Date: 5/5/2022

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	149 to 171	°C
Middle Temperature	171 to 193	°C
Front Temperature	193 to 227	°C
Nozzle Temperature	193 to 227	°C
Processing (Melt) Temp	193 to 227	°C
Mold Temperature	21 to 52	°C
Back Pressure	0.345 to 1.03	MPa
Screw Speed	50 to 100	rpm
Cushion	3.56 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.	171 to 188	°C
Cylinder Zone 2 Temp.	182 to 196	°C
Cylinder Zone 3 Temp.	185 to 204	°C
Cylinder Zone 5 Temp.	204 to 227	°C
Die Temperature	204 to 227	°C

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.

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