

# Medalist® MD-10308 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

## General Information

### Product Description

Medalist MD-10308 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-10308 is a low hardness, low density, halogen-free grade that can be sterilized and is suitable for injection molding, extrusion, and cast film.

### General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability • Good Melt Strength • Good Processability • Good Stretchability	• Good Tear Strength • Good Toughness • Halogen Free • High Clarity • High Elasticity • High Elongation • Low Density	• Low Hardness • Low Odor • Low Specific Gravity • Puncture Resistant • Resilient • Soft
Uses	• Dental Applications • Film • Hospital Goods	• Medical Devices • Medical/Healthcare Applications • Rubber Replacement	• Soft Touch Applications
Agency Ratings	• ISO 10993-5	• ISO 13485	
Appearance	• Clear/Transparent	• Colors Available	
Forms	• Pellets		
Processing Method	• Cast Film	• Film Extrusion	• Injection Molding

## ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.868	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	15	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>2</sup> (100% Strain)	0.207	MPa	ASTM D412
Tensile Stress <sup>2</sup> (300% Strain)	0.414	MPa	ASTM D412
Tensile Strength <sup>2</sup> (Break)	4.24	MPa	ASTM D412
Tensile Elongation <sup>2</sup> (Break)	800	%	ASTM D412
Tear Strength <sup>2</sup>	15.8	kN/m	ASTM D624
Compression Set <sup>3</sup> (23°C, 24 hr)	11	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	10		
Shore A, 5 sec, Injection Molded	8		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -60.0	°C	ASTM D746

### 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.

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### Processing Information

Injection	Nominal Value	Unit
Rear Temperature	170 to 180	°C
Middle Temperature	185 to 200	°C
Front Temperature	185 to 200	°C
Nozzle Temperature	185 to 200	°C
Processing (Melt) Temp	185 to 200	°C
Mold Temperature	10 to 38	°C
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

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	188 to 204	°C
Cylinder Zone 2 Temp.	196 to 207	°C
Cylinder Zone 3 Temp.	199 to 210	°C
Cylinder Zone 4 Temp.	199 to 210	°C
Cylinder Zone 5 Temp.	204 to 216	°C
Die Temperature	204 to 216	°C

### Extrusion Notes

Screw Speed: 30 to 100 rpm; Screen pack: from 60/200/200/60 to 60/200/400/400/200/60 mesh size

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C, 510 mm/min

<sup>3</sup> Type 1

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