

Medalist® MD-13240 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Medalist MD-13240 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-13240 is a low hardness, low density, halogen-free grade that can be sterilized and is suitable for cast film, extrusion, and injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Melt Strength • Good Printability • Good Processability • Good Sterilizability	• Good Toughness • Halogen Free • Low Density • Low Flow • Low Hardness • Low Odor • Low Specific Gravity	• Puncture Resistant • Radiation Sterilizable • Resilient • Slip • Without Fillers
Uses	• Dental Applications • Film • Hospital Goods	• Medical Devices • Medical/Healthcare Applications • Pharmaceuticals	• Rubber Replacement
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Cast Film	• Film Extrusion	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.898	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (100% Strain)	1.59	MPa	ASTM D412
Tensile Stress ² (300% Strain)	3.79	MPa	ASTM D412
Tensile Strength ² (Break)	10.2	MPa	ASTM D412
Tensile Elongation ² (Break)	630	%	ASTM D412
Tear Strength	37.7	kN/m	ASTM D624
Compression Set ³ (23°C, 22 hr)	13	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	43		
Shore A, 5 sec, Injection Molded	40		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -60.0	°C	ISO 974

Revision Date: 12/20/2018

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	138 to 162	°C
Middle Temperature	162 to 180	°C
Front Temperature	171 to 193	°C
Nozzle Temperature	193 to 216	°C
Processing (Melt) Temp	193 to 216	°C
Mold Temperature	21 to 40	°C
Injection Rate	Moderate-Fast	
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.	191 to 199	°C
Cylinder Zone 2 Temp.	196 to 204	°C
Cylinder Zone 3 Temp.	202 to 210	°C
Cylinder Zone 4 Temp.	204 to 221	°C
Cylinder Zone 5 Temp.	204 to 221	°C
Die Temperature	204 to 221	°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

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

² Die C, 510 mm/min

³ Type 1

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