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/cm³	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

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Legal Statement

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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