Medalist® MD-12140H (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Medalist MD-12140H is a high performance thermoplastic elastomer designed for use in medical and healthcare applications requiring good flow and elastic properties. Medalist MD-12140H is a low density, low hardness, RoHS compliant, sterilizable grade suitable for injection molding.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Colorability • Good Flexibility • Good Moldability	• Good Sterilizability • Good Toughness • Halogen Free • High Flow • Low Density • Low Hardness	• Low Specific Gravity • Radiation (Gamma) Resistant • Resilient • Slip • Without Fillers
Uses	• Bladders • Bushings • Connectors • Disposable Hospital Goods • Flexible Grips	• Grommets • Handles • Knobs • Medical/Healthcare Applications • Pharmaceuticals	• Plugs • Rubber Replacement • Seals
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Injection Molding	• Multi Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.883	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	12	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2] (50% Strain)	0.931	MPa	ASTM D412
Tensile Stress [2] (100% Strain)	1.21	MPa	ASTM D412
Tensile Stress [2] (300% Strain)	2.00	MPa	ASTM D412
Tensile Strength [2] (Break)	4.76	MPa	ASTM D412
Tensile Elongation [2] (Break)	710	%	ASTM D412
Tear Strength [2]	18.9	kN/m	ASTM D624
Compression Set [3]			ASTM D395
23°C, 22 hr	19	%	
70°C, 22 hr	78	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	42		
Shore A, 5 sec, Injection Molded	40		

Revision Date: 6/6/2019

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Legal Statement

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	160 to 177	°C
Middle Temperature	182 to 204	°C
Front Temperature	193 to 216	°C
Nozzle Temperature	182 to 227	°C
Processing (Melt) Temp	182 to 227	°C
Mold Temperature	27 to 49	°C
Injection Rate	Moderate-Fast	
Back Pressure	0.172 to 0.689	MPa
Screw Speed	50 to 100	rpm
Cushion	3.81 to 12.7	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).

For applications where adhesion or overmolding to polypropylene (PP) is required, a higher processing temperature (up to 480 °F) is recommended.

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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