Medalist® MD-50173 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

The Medalist MD-50100 Series of medical-grade TPEs can be used as an alternative to flexible PVC and silicone in face masks used in respiratory therapy. Medalist MD-50173 is a high hardness, low density, RoHS compliant grade that can be sterilized and is suitable for 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 Colorability • Good Flexibility • Good Moldability	• Good Sterilizability • Good Toughness • Halogen Free • High Flow • High Hardness • Low Density	• Low Specific Gravity • No Animal Derived Components • Radiation (Gamma) Resistant • Resilient • Slip • Without Fillers
Uses	• Disposable Hospital Goods • Handles • Knobs	• Medical Devices • Medical/Healthcare Applications • Pharmaceuticals	• Plugs • Rubber Replacement
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	• Natural Color
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.892		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	13	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2] (50% Strain)	468	psi	ASTM D412
Tensile Stress [2] (100% Strain)	525	psi	ASTM D412
Tensile Stress [2] (300% Strain)	750	psi	ASTM D412
Tensile Strength [2] (Break)	1750	psi	ASTM D412
Tensile Elongation [2] (Break)	720	%	ASTM D412
Tear Strength - Flow [2]	335	lbf/in	ASTM D624
Compression Set [3] (73°F, 22 hr)	26	%	ASTM D395B
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	75		
Shore A, 5 sec, Injection Molded	73		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	320 to 350	°F
Middle Temperature	360 to 400	°F
Front Temperature	380 to 420	°F
Nozzle Temperature	360 to 440	°F
Processing (Melt) Temp	360 to 440	°F
Mold Temperature	80 to 120	°F
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 0.500	in

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).

Notes

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

[2] Die C, 20 in/min

[3] Type 1

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