



Medalist® MD-23163 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Vulcanizate

General Information

Product Description

Medalist MD-23163 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-23163 is a medium 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	• Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability • Good Flexibility	• Good Moldability • Good Sterilizability • Good Tear Strength • Good Toughness • Halogen Free • Low Density	• Low Specific Gravity • Medium Hardness • Radiation Sterilizable • Resilient
Uses	• Dental Applications • Gaskets • Hospital Goods • Medical Devices	• Medical/Healthcare Applications • Overmolding • Pharmaceuticals • Plugs	• Rubber Replacement • Seals
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.930		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	25	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (100% Strain)	435	psi	ASTM D412
Tensile Stress ² (300% Strain)	682	psi	ASTM D412
Tensile Strength ² (Break)	753	psi	ASTM D412
Tensile Elongation ² (Break)	330	%	ASTM D412
Tear Strength ²	146	lbf/in	ASTM D624
Compression Set ³			ASTM D395B
73°F, 22 hr	24	%	
158°F, 22 hr	41	%	
212°F, 22 hr	47	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	65		
Shore A, 5 sec, Injection Molded	63		

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Processing Information		
Injection	Nominal Value	Unit
Rear Temperature	300 to 340	°F
Middle Temperature	340 to 380	°F
Front Temperature	380 to 420	°F
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°F
Mold Temperature	60 to 100	°F
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	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