Medalist® MD-46180

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-46180 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-46180 is a medium hardness, high density, RoHS compliant grade that can be sterilized and is suitable for injection molding and extrusion.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant • Bondability • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability	• Good Melt Strength • Good Processability • Good Sterilizability • Halogen Free • High Density • High Elasticity	• Low Slip • Lubricated • Medium Hardness • Radiation (Gamma) Resistant
Uses	• Bladders • Closures • Dental Applications • Diaphragms • Disposable Hospital Goods	• Film • Flexible Grips • Hypodermic Syringe Parts • Medical/Healthcare Applications • Overmolding	• Rubber Replacement • Seals • Soft Touch Applications • Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity [2]	1.25		ASTM D792
Melt Mass-Flow Rate (MFR) [2] (200°C/5.0 kg)	9.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (50% Strain)	583	psi	ASTM D412
Tensile Stress (100% Strain)	643	psi	ASTM D412
Tensile Strength (Break)	702	psi	ASTM D412
Tensile Elongation (Break)	190	%	ASTM D412
Tear Strength	209	lbf/in	ASTM D624
Compression Set [3, 2] (158°F, 22 hr)	27	%	ASTM D395B
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness [2]			ASTM D2240
Shore A, 1 sec, Injection Molded	83		
Shore A, 5 sec, Injection Molded	80		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	149 to 171	°F
Middle Temperature	166 to 182	°F
Front Temperature	177 to 193	°F
Nozzle Temperature	177 to 204	°F
Processing (Melt) Temp	177 to 210	°F
Mold Temperature	30 to 52	°F
Injection Pressure	50.0 to 149	psi
Back Pressure	50.0 to 99.9	psi
Screw Speed	50 to 100	rpm
Cushion	0.140 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).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	177 to 188	°F
Cylinder Zone 2 Temp.	182 to 196	°F
Cylinder Zone 3 Temp.	185 to 204	°F
Cylinder Zone 4 Temp.	204 to 227	°F
Die Temperature	204 to 227	°F

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] TBD

[3] Type 1

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