# TEKNOR APEX Medalist<sup>®</sup> MD-12160 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

# **General Information**

### **Product Description**

Comorol

The Medalist MD-12100 Series are high performance thermoplastic elastomers designed for medical and healthcare applications requiring high elasticity and excellent moldability. Medalist MD-12160 is a medium hardness, low density, translucent grade, available in NAT and colors, which can be sterilized and exhibits excellent adhesion to polypropylene.

Material Status	<ul> <li>Preliminary Data</li> </ul>		
Availability	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>Latin America</li></ul>	North America
Features	<ul> <li>Autoclave Sterilizable</li> <li>Chemical Resistant</li> <li>Ethylene Oxide Sterilizable</li> <li>Good Adhesion</li> <li>Good Moldability</li> <li>Good Sterilizability</li> </ul>	<ul> <li>Good Toughness</li> <li>Halogen Free</li> <li>Low Density</li> <li>Low Specific Gravity</li> <li>Lubricated</li> <li>Medium Flow</li> </ul>	<ul> <li>Medium Hardness</li> <li>Radiation Sterilizable</li> <li>Resilient</li> <li>Slip</li> <li>Without Fillers</li> </ul>
Uses	<ul><li>Bushings</li><li>Closures</li><li>Disposable Hospital Goods</li><li>Flexible Grips</li></ul>	<ul> <li>Grommets</li> <li>Knobs</li> <li>Medical/Healthcare Applications</li> <li>Pharmaceuticals</li> </ul>	<ul><li> Plugs</li><li> Rubber Replacement</li></ul>
Agency Ratings	• ISO 10993 Part 5	• ISO 13485	
RoHS Compliance	RoHS Compliant		
Appearance	Colors Available	Natural Color	Translucent
Forms	Pellets		
Processing Method	Injection Molding		

ASTM & ISO Properties <sup>1</sup>				
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	0.889		ASTM D792	
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	8.0	g/10 min	ASTM D1238	
Elastomers	Nominal Value	Unit	Test Method	
Tensile Stress <sup>2</sup> (50% Strain)	290	psi	ASTM D412	
Tensile Stress <sup>2</sup> (100% Strain)	345	psi	ASTM D412	
Tensile Stress <sup>2</sup> (300% Strain)	480	psi	ASTM D412	
Tensile Strength <sup>2</sup> (Break)	890	psi	ASTM D412	
Tensile Elongation <sup>2</sup> (Break)	640	%	ASTM D412	
Tear Strength <sup>2</sup>	185	lbf/in	ASTM D624	
Compression Set <sup>3</sup>			ASTM D395	
73°F, 22 hr	19	%		
158°F, 22 hr	35	%		

# Hardness

Durometer Hardness Shore A, 1 sec

Shore A, 5 sec



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The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

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## Legal Statement

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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

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Type 1

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