

Medalist® MD-53293 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

General Information

Product Description

The Medalist MD-53200 Series is a high performance thermoplastic elastomer series, designed to be a sustainable alternative to flexible PVC for medical tubing and film. Medalist MD-53293 is a low density, high hardness, clear, lubricated grade, available in Nat and color-matched, intended for use in medical and healthcare applications, with excellent processability and throughput in extruded tubing.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability • Good Melt Strength	• Good Processability • Good Sterilizability • Good Toughness • Halogen Free • High Clarity • High Hardness	• High Purity • Kink Resistant • Low Density • Low Specific Gravity • Lubricated • Radiation (Gamma) Resistant
Uses	• Clear Sheet • Film • Hose	• Medical/Healthcare Applications • Pharmaceuticals • Rubber Replacement	• Tubing
Agency Ratings	• ISO 10993 Part 5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	
Forms	• Pellets		
Processing Method	• Cast Film	• Extrusion	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain)	1320	psi	ASTM D412
Tensile Stress (100% Strain)	1260	psi	ASTM D412
Tensile Stress (300% Strain)	1360	psi	ASTM D412
Tensile Strength (Break)	2450	psi	ASTM D412
Tensile Elongation (Break)	710	%	ASTM D412
Tear Strength	500	lbf/in	ASTM D624
Compression Set (73°F, 22 hr)	38	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	94		
Shore A, 5 sec	93		

Legal Statement

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 purchaser assumes 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 others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Revision Date: 4/2/2017

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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 440	°F
Nozzle Temperature	380 to 440	°F
Processing (Melt) Temp	380 to 440	°F
Mold Temperature	70 to 125	°F
Back Pressure	50.0 to 150	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

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	320 to 370	°F
Cylinder Zone 2 Temp.	360 to 385	°F
Cylinder Zone 3 Temp.	360 to 400	°F
Cylinder Zone 4 Temp.	360 to 400	°F
Cylinder Zone 5 Temp.	360 to 410	°F
Die Temperature	350 to 420	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm.

Screen Pack Recommendation:

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.

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*In U.S. for Vinyls, TPEs, Colorants,
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