Medalist® MD-12342

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Medalist MD-12342 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-12342 is a low hardness, low density, RoHS compliant grade that can be sterilized and is suitable for both injection molding and extrusion.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Ethylene Oxide Sterilizable • Excellent Processability • Good Colorability • Good Flexibility	• Good Moldability • Good Processability • High Elasticity • High Purity • Kink Resistant	• Low Density • Low Hardness • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Medical Devices • Medical Packaging • Medical/Healthcare Applications	• Pharmaceutical Packaging • Pharmaceuticals • Transparent or Translucent Parts	• Tubing
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color	• Translucent	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.888	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	6.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (50% Strain)	1.07	MPa	ASTM D412
Tensile Stress (100% Strain)	1.38	MPa	ASTM D412
Tensile Stress (300% Strain)	2.86	MPa	ASTM D412
Tensile Strength (Break)	13.1	MPa	ASTM D412
Tensile Elongation (Break)	720	%	ASTM D412
Tear Strength	32.7	kN/m	ASTM D624
Compression Set			ASTM D395
23°C, 22 hr	17	%	
70°C, 22 hr	97	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	44		
Shore A, 5 sec	42		

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: 1/17/2018

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	149 to 171	°C
Middle Temperature	171 to 193	°C
Front Temperature	193 to 227	°C
Nozzle Temperature	193 to 227	°C
Processing (Melt) Temp	193 to 227	°C
Mold Temperature	21 to 52	°C
Back Pressure	0.345 to 1.03	MPa
Screw Speed	50 to 100	rpm
Cushion	3.56 to 25.4	mm

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.	171 to 188	°C
Cylinder Zone 2 Temp.	182 to 196	°C
Cylinder Zone 3 Temp.	185 to 204	°C
Cylinder Zone 4 Temp.	204 to 227	°C
Die Temperature	204 to 227	°C

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.

Teknor Apex Company
Corporate Headquarters

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

Engineered Thermoplastics (Chem Polymer)
505 Central Avenue
Pawtucket, Rhode Island 02861 U.S.

Phone: 401-725-8000
Fax: 401-725-8095
Toll Free (U.S. only) 800-556-3864

www.teknorapex.com
info@teknorapex.com

Teknor Apex B.V.

Brightlands Chemelot Campus Umonderbaan 22
6167 RD Geleen, Netherlands

Phone: +31 46 7020 950
Fax: +31 46 7020 990

www.teknorapex.com
tpe@teknorapex.com

Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.

No. 78 Ping Sheng Road

Suzhou Industrial Park
Jiangsu, China 215126

Phone: (86) 512-6287-1550
Fax: (86) 512-6288-8371

www.teknorapex.com
infotaap@teknoapex.com

Teknor Apex Asia Pacific PTE. LTD.

41 Shipyard Road

Singapore 628134

Phone: (65) 6265-2544
Fax: (65) 6265-1821

www.teknorapex.com
infotaap@teknorapex.com

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