Medalist® MD-84348 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-84300 series are high performance thermoplastic elastomers designed specifically for extrusion and injection molded electrical applications in the medical and healthcare industry. The Medalist MD-84300 series are a better alternative to traditional TPVs used in such applications. Medalist MD-84348 is a low hardness, low density grade with good electrical properties and can be sterilized by autoclave, ETO, or gamma radiation.

General			
Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Chemical Resistant • Electrically Insulating • Ethylene Oxide Sterilizable • Good Color Stability	• Good Colorability • Good Sterilizability • Halogen Free • High Tensile Strength • Low Density	• Low Flow • Low Hardness • Low Specific Gravity • Radiation Sterilizable • Slip
Uses	• Flexible Jacketing • Medical/Healthcare Applications	• Pharmaceuticals • Wire & Cable Applications	
Agency Ratings	• 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	0.920		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	0.50	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	160	psi	ASTM D412
Tensile Stress (300% Strain)	325	psi	ASTM D412
Tensile Strength (Break)	1950	psi	ASTM D412
Tensile Elongation (Break)	730	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	50		
Shore A, 5 sec	48		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -76.0	°F	ASTM D746
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air (277°F, 168 hr)	28	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	0.0	%	ASTM D573
Change in Tensile Strength			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-39	%	
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-22	%	

Revision Date: 6/8/2016

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
73°F	5.8E+16	ohms·cm	
122°F	1.1E+15	ohms·cm	
Dielectric Strength	1100	V/mil	ASTM D149
Dielectric Constant (1 kHz)	2.23		ASTM D150
Dissipation Factor (1 kHz)	4.1E-4		ASTM D150

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, NT)	HB		UL 94
Oxygen Index	19	%	ASTM D2863

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (392°F, 207 sec^-1)	320	Pa·s	ASTM D3835

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	390 to 420	°F
Middle Temperature	415 to 430	°F
Front Temperature	430 to 440	°F
Nozzle Temperature	430 to 445	°F
Processing (Melt) Temp	430 to 445	°F
Mold Temperature	77 to 150	°F
Injection Pressure	200 to 1000	psi
Back Pressure	25.0 to 50.0	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).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	380 to 410	°F
Cylinder Zone 2 Temp.	390 to 420	°F
Cylinder Zone 3 Temp.	415 to 430	°F
Cylinder Zone 4 Temp.	415 to 430	°F
Cylinder Zone 5 Temp.	430 to 440	°F
Die Temperature	430 to 445	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

[1] Typical properties: these are not to be construed as specifications.

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