

# Medalist® MD-53278 (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

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-53278 is a low density, medium 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 Information	
Features	Low Specific Gravity
	High purity
	Low density
	Pressure cooker disinfection
	Ethylene oxide disinfection
	Anti-gamma radiation
	Workability, good
	Good melt strength
	Good coloring
	Good adhesion
	Good chemical resistance
	Kink resistance
	Definition, high
	Good toughness
	Lubrication
	No kinetic components
	Halogen-free
	Medium hardness
Uses	Clear Sheet
	Films
	Pipe
	Pipe fittings
	Rubber substitution
	Drug
	Medical/nursing supplies
Agency Ratings	ISO 10993 Part 5
	ISO 13485
RoHS Compliance	RoHS compliance
Appearance	Available colors

Clear/transparent

Forms	Particle
Processing Method	Extrusion cast film Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	7.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	81		ASTM D2240
Shaw A, 5 seconds	79		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
50% strain	4.45	MPa	ASTM D412
100% strain	4.79	MPa	ASTM D412
300% strain	6.76	MPa	ASTM D412
Tensile Strength (Break)	14.9	MPa	ASTM D412
Tensile Elongation (Break)	620	%	ASTM D412
Tear Strength	64.3	kN/m	ASTM D624
Compression Set			ASTM D395
23°C, 22 hr	23	%	ASTM D395
70°C, 22 hr	83	%	ASTM D395

#### Legal statement

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

#### Injection instructions

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 - 188	°C
Cylinder Zone 2 Temp.	182 - 196	°C
Cylinder Zone 3 Temp.	185 - 204	°C
Cylinder Zone 4 Temp.	185 - 204	°C
Cylinder Zone 5 Temp.	204 - 227	°C
Die Temperature	204 - 227	°C

#### Extrusion instructions

Screw Speed: 30 to 100 rpm. Screen Pack Recommendation: 60/200/200/60 to 60/200/400/400/200/60 mesh size.

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#### Recommended distributors for this material

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