Medalist® MD-555

Thermoplastic Elastomer

Teknor Apex Company

Message:

Medalist MD-555 is a high performance thermoplastic elastomer intended for use in medical and healthcare applications, especially medical tubing. Medalist MD-555 is a medium hardness, low density, clear grade designed to be a sustainable alternative to flexible PVC with excellent processability and throughput in extruded tubing.

General Information	
Features	Low Specific Gravity High purity Low density Pressure cooker disinfection Good disinfection Ethylene oxide disinfection Anti-gamma radiation Workability, good Good adhesion Good chemical resistance Definition, high No kinetic components Halogen-free Medium hardness
Uses	Films Pipe fittings Rubber substitution Drug Medical/nursing supplies
RoHS Compliance	RoHS compliance
Appearance	Clear/transparent
Forms	Particle
Processing Method	Extrusion cast film Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	15	g/10 min	ASTM D1238

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	55		ASTM D2240
Shaw A, 5 seconds	53		ASTM D2240

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
50% strain	1.52	MPa	ASTM D412
100% strain	1.86	MPa	ASTM D412
300% strain	2.86	MPa	ASTM D412
Tensile Strength (Break)	9.20	MPa	ASTM D412
Tensile Elongation (Break)	890	%	ASTM D412
Tear Strength	31.0	kN/m	ASTM D624
Compression Set (23°C, 22 hr)	9.1	%	ASTM D395

Legal statement

Injection	Nominal Value	Unit
Rear Temperature	127 - 149	°C
Middle Temperature	138 - 160	°C
Front Temperature	149 - 171	°C
Nozzle Temperature	171 - 193	°C
Processing (Melt) Temp	171 - 193	°C
Mold Temperature	21 - 38	°C
Injection Pressure	1.38 - 5.52	MPa
Back Pressure	0.172 - 0.689	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 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.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

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