

# Medalist® MD-12368

Thermoplastic Elastomer

Teknor Apex Company

## Message:

Medalist(R)MD-12368 is a high performance thermoplastic elastomer intended for use in medical and healthcare applications. Medalist(R)MD-12368 is a low density, medium hardness, clear grade designed suitable for extrusion, extruded tubing, and injection molding.

General Information	
Features	Low density
	Radiation disinfection
	Pressure cooker disinfection
	Good disinfection
	Ethylene oxide disinfection
	Anti-gamma radiation
	Workability, good
	Good formability
	Good strength
	Good flexibility
	Good tear strength
	Good coloring
	Good wear resistance
	Good adhesion
	Good chemical resistance
	Good toughness
	Halogen-free
	Elastic
	Medium hardness
Uses	Disposable Hospital Goods
	Plug
	Diaphragm
	Pipe fittings
	Soft handle
	Shell
	Rubber substitution
	Drug
	Medical/nursing supplies
Agency Ratings	ISO 10993 Part 5
	ISO 13485

RoHS Compliance	RoHS compliance
Appearance	Available colors Clear/transparent Natural color
Forms	Particle
Processing Method	Extrusion 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)	1.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	74		ASTM D2240
Shaw A, 5 seconds	72		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Flow <sup>1</sup>			ASTM D412
100% strain	2.86	MPa	ASTM D412
300% strain	4.83	MPa	ASTM D412
Tensile Strength - Flow <sup>2</sup> (Break)	14.3	MPa	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength - Flow <sup>3</sup>	46.8	kN/m	ASTM D624
Compression Set <sup>4</sup> (23°C, 22 hr)	19	%	ASTM D395
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-60.0	°C	ASTM D746

#### Legal statement

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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.	138 - 149	°C
Cylinder Zone 2 Temp.	149 - 160	°C
Cylinder Zone 3 Temp.	160 - 182	°C
Cylinder Zone 4 Temp.	160 - 182	°C
Cylinder Zone 5 Temp.	171 - 193	°C
Die Temperature	182 - 204	°C

#### Extrusion instructions

Screw Speed: 30 to 100 rpm

#### NOTE

1. C mold, 510mm/min
2. C mold, 510mm/min
3. C mold, 510mm/min
4. Type 1

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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

