

Medalist® MD-12170H (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Medalist MD-12100H series are high performance thermoplastic elastomers designed for use in medical and healthcare applications requiring high flow. Medalist MD-12170H is a low density, medium hardness, resilient grade, available in NAT and colors, which can be sterilized and exhibits excellent adhesion to polypropylene.

General Information	
Features	Low Specific Gravity
	Without Fillers
	Low density
	Pressure cooker disinfection
	smoothness
	Good disinfection
	Ethylene oxide disinfection
	Anti-gamma radiation
	Good formability
	Good flexibility
	Good coloring
	High liquidity
	Good chemical resistance
	Good toughness
	Halogen-free
	Elastic
	Medium hardness
Uses	Disposable Hospital Goods
	Handle
	Plug
	Bushing
	Washer
	Connector
	Seals
	Airbag
	Soft handle
	Rubber substitution
	Knob
	Drug
	Medical/nursing supplies

Agency Ratings	ISO 10993 Part 5 ISO 13485		
RoHS Compliance	RoHS compliance		
Appearance	Translucent Available colors Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.885	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	17	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	72		ASTM D2240
Shore A, 5 seconds, injection molding	70		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
50% strain	2.72	MPa	ASTM D412
100% strain	3.14	MPa	ASTM D412
300% strain	4.34	MPa	ASTM D412
Tensile Strength ² (Break)	5.52	MPa	ASTM D412
Tensile Elongation ³ (Break)	500	%	ASTM D412
Tear Strength - Flow ⁴	29.8	kN/m	ASTM D624
Compression Set ⁵			ASTM D395
23°C, 22 hr	25	%	ASTM D395
70°C, 22 hr	80	%	ASTM D395
Legal statement			
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Injection	Nominal Value	Unit	
Rear Temperature	160 - 177	°C	
Middle Temperature	182 - 204	°C	
Front Temperature	193 - 216	°C	
Nozzle Temperature	182 - 227	°C	
Processing (Melt) Temp	182 - 227	°C	
Mold Temperature	27 - 49	°C	

Injection Rate	Moderate-Fast	
Back Pressure	0.172 - 0.689	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 12.7	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).

NOTE

- | | |
|----|-------------------|
| 1. | C mold, 510mm/min |
| 2. | C mold, 510mm/min |
| 3. | C mold, 510mm/min |
| 4. | C mold, 510mm/min |
| 5. | 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

