

Medalist® MD-12180H (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

General Information

Product Description

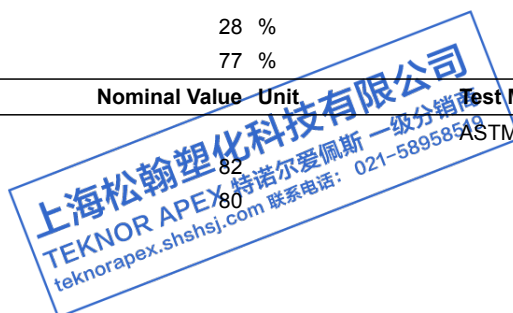
Medalist MD-12100H series are high performance thermoplastic elastomers designed for use in medical and healthcare applications requiring high flow. Medalist MD-12180H is a low density, higher hardness, resilient grade, available in NAT and colors, which can be sterilized and exhibits excellent adhesion to polypropylene.

General

| | | | |
|-------------------|---|--|--|
| Material Status | • Preliminary Data | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Features | • Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Good Adhesion • Good Colorability • Good Flexibility | • Good Moldability • Good Sterilizability • Good Toughness • Halogen Free • High Flow • High Hardness | • Low Density • Low Specific Gravity • Radiation (Gamma) Resistant • Resilient • Slip • Without Fillers |
| Uses | • Bladders • Bushings • Connectors • Disposable Hospital Goods • Flexible Grips | • Grommets • Handles • Knobs • Medical/Healthcare Applications • Pharmaceuticals | • Plugs • Rubber Replacement • Seals |
| Agency Ratings | • ISO 10993 Part 5 | • ISO 13485 | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Colors Available | • Natural Color | • Translucent |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|----------|-------------|
| Specific Gravity | 0.889 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 14 | g/10 min | ASTM D1238 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress ² (50% Strain) | 485 | psi | ASTM D412 |
| Tensile Stress ² (100% Strain) | 535 | psi | ASTM D412 |
| Tensile Stress ² (300% Strain) | 700 | psi | ASTM D412 |
| Tensile Strength ² (Break) | 865 | psi | ASTM D412 |
| Tensile Elongation ² (Break) | 480 | % | ASTM D412 |
| Tear Strength ² | 190 | lbf/in | ASTM D624 |
| Compression Set ³ | | | ASTM D395 |
| 73°F, 22 hr | 28 | % | |
| 158°F, 22 hr | 77 | % | |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 sec, Injection Molded | 82 | | |
| Shore A, 5 sec, Injection Molded | 80 | | |



Revision Date: 6/1/2016

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Legal Statement

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Processing Information

| Injection | Nominal Value | Unit |
|------------------------|----------------|------|
| Rear Temperature | 320 to 350 | °F |
| Middle Temperature | 360 to 400 | °F |
| Front Temperature | 380 to 420 | °F |
| Nozzle Temperature | 360 to 440 | °F |
| Processing (Melt) Temp | 360 to 440 | °F |
| Mold Temperature | 80 to 120 | °F |
| Injection Rate | Moderate-Fast | |
| Back Pressure | 25.0 to 100 | psi |
| Screw Speed | 50 to 100 | rpm |
| Cushion | 0.150 to 0.500 | 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).

Notes

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

² Die C, 20 in/min

³ Type 1

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